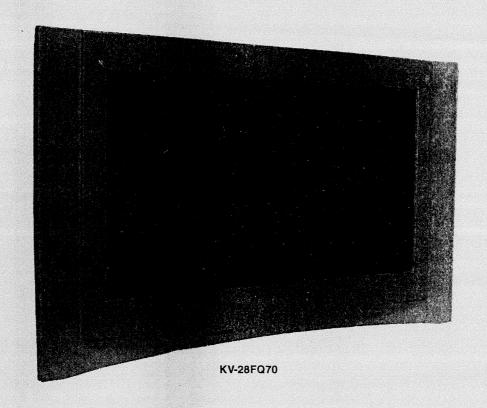


# **SERVICE MANUAL**

AE-6B CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
KV-28FQ70B	RM-938	FR	SCC-Q83P-A	KV-28FQ70U	I RM-938	UK	SCC-Q84Q-A
KV-28FQ70E	RM-938	ESP	SCC-Q81R-A				

# **FD** Trinitron





RM-938

TRINITRON ® COLOR TV
SONY®

#### **TABLE OF CONTENTS** Page Title Page Section Title Section 5. DIAGRAMS 3 Caution ..... 4 Specifications ..... 25 Block Diagrams (1) 6 5-1. Connectors ..... 26 Block Diagrams (2) ...... Self Diagnostic Software ..... 2.7 Block Diagrams (3) ..... Block Diagrams (4) 28 ...... 1. GENERAL Circuit Board Location 28 5-2. ...... Switching On the TV and Schematic Diagrams and 5-3. **Automatically Tuning** ...... 28 Printed Wiring Boards ..... Introducing and Using the Menu 29 \* A Board Schematic ..... System 35 Q \* A Board PWB ..... Menu Guide ..... 39 \* F1 Board Schematic ..... 10 Teletext ..... 40 \* F1 Board PWB ...... 10 ..... **Fastext** \* H1 Board Schematic 39 ..... Remote Control Configuration 40 \* H1 Board PWB 11 for VCR/DVD 39 \* VM Board Schematic ...... 11 Specifications ..... 40 \* VM Board PWB ..... 12 Troubleshooting ...... 41 \* G Board Schematic ..... 40 \* G Board PWB ...... 2. DISASSEMBLY 42 \* C Board Schematic ..... \*C Board PWB 43 ..... 13 2-1. Rear Cover Removal 44 \* M2 Board Schematic Speaker Connector Disconnection ..... 13 2-2. 43 \* M2 Board PWB ..... 13 2-3. Chassis Removal and Refitting ..... 45 \* D2 Board Schematic 14 ..... 2-4. Service Position ..... 43 \* D2 Board PWB ..... G Board Removal ..... 2-5. \* D Board Schematic 47 ..... 14 2-6. D2 Board Removal ..... \* D Board PWB 46 ..... D Board Removal 14 2-7. ..... 15 2-8. M2 Board Removal 48 Semiconductors 5-4. ..... 15 Service Connector for M2 Board..... 2-9. IC Blocks 5-5. 15 2-10. Wire Dressing ..... 16 Picture Tube Removal 2-11. 6. EXPLODED VIEWS 17 **Bottom Plates** ..... 53 ..... 6-1. Chassis 3. SET-UP ADJUSTMENTS Picture Tube ..... 6-2. 18 3-1 Beam Landing ..... 7. ELECTRICAL PARTS LIST ..... 19 3-2. Convergence 21 Focus Adjustment 3-3. Screen (G2), White Balance 21 3-4. 4. CIRCUIT ADJUSTMENTS **ATTENTION** 22 4-1. **Electrical Adjustments** ..... 24 Test Mode 2 ..... 4-2. APRES AVOIR DECONNECTE LE CAP DE'LANODE,

# CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR THE CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

#### WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD DUE TO LIVE CHASSIS, THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE POWER LINE.

# SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED A ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

APRES AVOIR DECONNECTE LE CAP DE'LANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

# ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENTION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÈ LORS DE TOUT DÈPANNAGE LE CHÁSSIS DE CE RÈCEPTEUR EST DIRECTMENT RACCORDÈ Á L'ALIMENTATION SECTEUR.

# ATTENTION AUX COMPOSANTS RELATIFS Á LA SECURITÈ!!

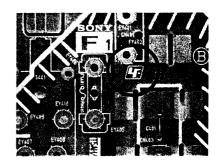
LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE & SUR LES SCHÈMAS DE PRINCIPE, LES VUES EXPLOSÈES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÈCURITÈ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPSANTS SONY DONT LE NUMÈRO DE PIÈCE EST INDIQUÈ DANS LE PRÈSENT MANUEL OU DANS DES SUPPLÈMENTS PUBLIÈS PAR SONY.

# **CAUTION**

# **Lead Free Soldered Boards**

The circuit boards listed below [Table 1] used in these models may have been processed using Lead Free Solder. The boards are identified by the LF logo located close to the board designation e.g. F1, H1 etc [ see examples ]. The servicing of these boards requires special precautions to be taken as outlined below.

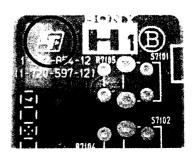
#### example 1



example 2

Table 1

Board	Function
С	R,G,B Out
F1	Power Switch/Fuse/SIRCS/Standby LED
141	Front AV Input/Headphone and Control Switches



It is strongly recommended to use Lead Free Solder material in order to guarantee optimal quality of new solder joints. Lead Free Solder is available under the following part numbers:

Partnumber	Diameter	Remarks
7-640-005-19	0.3mm	0.25Kg
7-640-005-20	0.4mm	0.50Kg
7-640-005-21	0.5mm	0.50Kg
7-640-005-22	0.6mm	0.25Kg
7-640-005-23	0.8mm	1.00Kg
7-640-005-24	1.0mm	1.00Kg
7-640-005-25	1.2mm	1.00Kg
7-640-005-26	1.6mm	1.00Kg

Due to the higher melting point of Lead Free Solder the soldering iron tip temperature needs to be set to 370 degrees centigrade. This requires soldering equipment capable of accurate temperature control coupled with a good heat recovery characteristics.

For more information on the use of Lead Free Solder, please refer to http://www.sony-training.com

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
В	B/G/H, D/K, I, L	GERMAN/NICAM Stereo	VHF: E2-E12, R1-R12, S01-S03, F02-F10, B-Q UHF: E21-E69, F21-F69, B21-B69, R21-R69 CABLE TV: S01-S20 HYPER: S21-S41	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
E	B/G/H, D/K	GERMAN/NICAM Stereo	VHF: E2-E12, R1-R12, S01-S03 UHF: E21-E69, R21-R69 CABLE TV: S01-S20 HYPER: S21-S41	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
U	ſ	NICAM Stereo	UHF : B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

	Flat Display FD Trinitron	Sound output		
Picture Tube	Approx 82 cm (28 inches) (Approx 76 cm picture measured diagonally)	Right and Left speaker Sub Woofer	2x20W (Music Power) 2x10W (RMS) 1x30W (Music Power) 1x15W (RMS)	
Input/Output Terminals [I	REAR]	General Specifications		
1: 21-pin Euro connector (CENELEC standard)	Inputs for Audio and Video signals. Inputs for RGB. Outputs of TV Video and Audio	Power Requirements	220 - 240V	
	signals.	Power Consumption	125W	
2: 21-pin Euro connector	Inputs for Audio and Video signals. Inputs for RGB. Outputs of TV Video and Audio signals. (Monitor Out)	Dimensions	Approx 789 x 533 x 521mm	
	,	Weight	Approx 46.5kg	
3: 21-pin Euro connector	Inputs for Audio and Video signals. Inputs for S Video. Outputs of TV Video and Audio signals. (selectable)	Supplied Accessories	RM-938 Remote Commander (1) IEC designated R6 battery (2)	
Phono Jacks	Output Connectors variable for Audio Signals	Other Features	100 Hz picture, DNR, Auto Noise Reduction Teletext, Smartlink, BBE, Virtual Dolby	
Input/Output Terminals [	SIDE]	Remote Control System : Infrared Control		
Headphone jack	stereo mini jack		3V dc	
Audio inputs	phono jacks	Power requirements	2 batteries IEC designation	
Video inputs	phono jacks		R6 (size AA)	
	4 pin DIN			

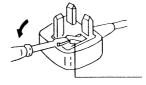
Model Name Item	KV-28FQ70B	KV-28FQ70E	<sup>36</sup> KV-28FQ70U
Pal Comb	OFF	OFF	OFF
PIP	OFF	OFF	OFF
RGB Priority	ON	ON	ON
Woofer Box	ON	ON	ON
Scart 1	ON	ON	ON
Scart 2	ON	ON	ON
Scart 3	ON	ON	ON
Side in (4)	ON	ON	ON
Projector	OFF	OFF	OFF
Norm B/G	ON	ON	OFF
Norm I	ON	OFF	ON
Norm D/K	ON	ON	OFF
Norm AUS	OFF	OFF	OFF
Norm L	ON	OFF	OFF
Norm SAT	OFF	OFF	OFF
Norm M	OFF	OFF	OFF
Teletext	ON	ON	ON
Nicam Stereo	ON	ON	ON

# **WARNING (UK Models only)**

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** rating. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by ASTA to **BS 1362**, ic one that carries the \*\* mark.

IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR THE OUTLET SOCKETS IN YOUR HOME, IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET.

When an alternative type of plug is used, it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse. Open the fuse compartment with a screwdriver blade and replace the fuse.

FUSE

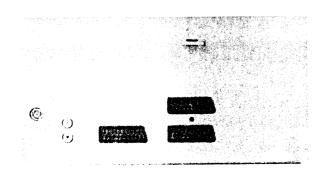
19 17 15 13 11	20 18 16 14 12 10
8 f	11
13	1
1	
1 !	r. *****
, , ,	8
7	CILLIE
11 11 11	6
5	1
1 1	4
3	
1	2

Pin No	1	2	3	Signal	Signal level
1	0	0	0	Audio output B (right)	Standard level : 0.5V rms Output impedence : Less than 1kohm*
2	0	0	0	Audio input B (right)	Standard level : 0.5V rms Output impedence : More than 10kohm*
3	0	0	0	Audio output A (left)	Standard level : 0.5V rms Output impedence : Less than 1kohm*
4	0	0	0	Ground (audio)	
5	0	0	0	Ground (blue)	
6	0	0	0	Audio input A (left)	Standard level : 0.5V rms Output impedence : More than 10kohm*
7	0	•	•	Blue input	0.7 +/- 3dB, 75 ohms positive
8	0	0	0	Function select (AV control)	High state (9.5-12V): Part mode Low state (0-2V): TV mode Input impedence: More than 10K ohms Input capacitance: Less than 2nF
9	0	0	0	Ground (green)	
10	0	0	0	Open	
11	0	•	•	Green	Green signal : 0.7 +/- 3dB, 75 ohms, positive
12	0	0	0	Open	
13	0	0	0	Ground (red)	
14	0	0	0	Ground (blanking)	
	0	-	-	Red input	0.7 +/- 3dB, 75 ohms, positive
15	-	0	0	(S signal Chroma input)	0.3 +/- 3dB, 75 ohms, positive
16	0	•	•	Blanking input (Ys signal)	High state (1-3V) Low state (0-0.4V) Input impedence : 75 ohms
17	0	0	0	Ground (video output)	
18	0	0	0	Ground (video input)	
19	0	0	0	Video output,	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
	0	-	-	Video input	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
20	-	0	0	Video input Y (S signal)	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
21	0	0	0	Common ground (plug, shield)	

O Connected

Not Connected (open) \* at 20Hz - 20kHz

# **Rear Connection Panel**



# **Front Connection Panel**



S-Video socket

S Video socket pin configuration					
Pin No	Signal	Signal Level			
1	Ground	-			
2	Ground	-			
3	Y (S signal) input	1V+/- 3dB 75ohm, positive Sync. 0.3V -3 +10dB			
4	C (S signal) input	0.3V+/- 3dB 75ohm, positive Sync.			

# **AE-6B SELF DIAGNOSTIC SOFTWARE**

The identification of errors within the AE-6B chassis is triggered in one of two ways:-1: Busy or 2: Device failure to respond to HC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED (Series of flashes which must be counted) See table 1, non fatal errors are reported using this method.

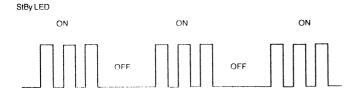
1.

Each time the software detects an error it is stored within the NVM. See Table 2.

Table 1

Error Message	LED Code
No error	00
Reserved	01
OCP (Over Current Protection)	02
Over Voltage Protection	03
No Vertical Sync	04
IKR Error at power on	05
IIC bus clock and/or data lines low at power on	06
NVM no IIC bus acknowledge at power on	07
Horizontal Protection	08
Tuner no acknowledge at power on	09
Sound Processor Error	10
Reserved	11
Scanrate Error	12
DAC Error	13
Backend Error	14
Dynamic Convergence Error	15
PIP Error	16

#### Flash Timing Example: e.g. error number 3



# How to enter into Table 2

- Turn on the main power switch of the TV set.
- 2. Program Remote Commander for Operation in Service Mode. [See Page 22].
- 3. Press 'VIDEO' 'VIDEO' > 'MENU' on the Remote Commander.
- Using the Remote Commander, Scroll to the 'Error Menu' item using the down arrow key, then press the right arrow key.
- The following table will be displayed indicating the error count.

Table 2

OCP	(0. 255)	0
OVP	, ,	0
VSYNC	• •	
IKR	, ,	
IIC	(0, 255)	0
NVM	(0, 255)	0
HPROT	(0, 255)	0
TUNER	(0, 255)	0
SOUNDP	(0, 255)	0 .
-	(0, 255)	0
SCANRATE	(0, 255)	0
DAC	(0, 255)	0
BACKEND	(0, 255)	0
DYN CON	(0, 255)	0
PIP	(0, 255)	0
		14
		7
	OVP VSYNC IKR IIC NVM HPROT TUNER SOUNDP - SCANRATE DAC BACKEND DYN CON	OVP (0, 255) VSYNC (0, 255) IKR (0, 255) IIC (0, 255) NVM (0, 255) HPROT (0, 255) TUNER (0, 255) SOUNDP (0, 255) - (0, 255) SCANRATE (0, 255) DAC (0, 255) BACKEND (0, 255) DYN CON (0, 255)

Note: To clear the error count data press '80' on the Remote commander.

# Switching On the TV and Automatically Tuning

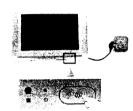
The first time you switch on your TV, a sequence of menu screens appear on the TV enabling you to: 1) choose the language of the menu screen, 2) adjust the picture slant. 3) search and store all available channels (TV Broadcast) and 4) change the order in which the channels (TV Broadcast) appear on the screen.

However, if you need to change any of these settings at a later date, you can do that by selecting the appropriate option in the (Set Up menu) or by pressing the Auto Start Up Button Don the TV set.

1 Connect the TV plug to the mains socket (220-240V AC,

The first time that the TV set is connected, it is usually turned on. If the TV is off, press the **①** on/off button on the TV set to turn on the TV.

The first time you switch on the TV, a Language menu displays automatically on the TV screen.



**2** Press the ◆ or ◆ button on the remote control to select the language, then press the OK button to confirm your selection. From now on all the menus will appear in the selected language.





GB

**3** Because of the earth's magnetism, the picture might slant. The Picture Rotation menu allows you to correct the picture slant if it is necessary.

- a) If it is not necessary, press OK to select Not necessary.
- b) If it is necessary, press ◆ or ◆ to select Adjust now, then press OK and correct any slant of the picture between -5 and +5 by pressing ◆ or ◆ . Finally press





4 The Auto Tuning menu appears on the screen. Press the OK button to select Yes.



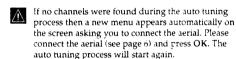


5 The TV starts to automatically search and store all available broadcast channels for you.

This procedure could take some minutes. Please be patient and do not press any buttons, otherwise automatic tuning will not be completed.



In some countries the TV Broadcaster installs the channels automatically (ACI system). In this case, the TV Broadcaster sends a menu in which you can select your city by pressing the  $\bullet$  or  $\bullet$  button and OK to store the channels.







- After all available channels are captured and stored, the Programme Sorting menu automatically appears on the screen enabling you to change the order in which the channels appear on the screen.
- a) If you wish to keep the broadcast channels in the tuned order, go to step 7.
- **b)** If you wish to store the channels in a different order:
  - 1 Press the  $\bullet$  or  $\bullet$  button to select the programme number with the channel (TV Broadcast) you wish to rearrange, then press the - button.
  - **2** Press the  $\clubsuit$  or  $\spadesuit$  button to select the new programme number position for your selected channel (TV Broadcast), then press OK.
  - 3 Repeat steps b)1 and b)2 if you wish to change the order of the other channels.









**7** Press the MENU button to remove the menu from the screen.



Your TV is now ready for use

OK to store.

continued...

Level 1

Level 2

#### Level 3 / Function

#### MANUAL PROGRAMME PRESET

The "Manual Programme Preset" option in the "Set Up" menu allows you to:

- a) Preset channels or the VCR channel one by one to the programme order of your choice. To do this:
- After selecting the "Manual Programme Preset" option, press • then with Programme option highlighted press Press • or • to select which programme number you want to preset the channel on (for VCR, select programme number "0"). Then press .
- **2** After selecting the **Channel** option, press **.** Then press the number buttons to enter directly the channel number of the TV Broadcast or the channel of the VCR signal. If you do not know the channel number, press lacktriangle or lacktriangle to search for it. When you have tuned the desired channel, press OK twice to store.

Repeat all the above steps to tune and store more channels.

b) Label a channel using up to five characters.

To do this: Highlighting the Programme option, press the PROG +/- button to select the programme number with the channel you wish to name. When the programme you want to name appears on the screen, select the Label option and press . Next press • or • to select a letter, number or "-" for a blank. Press to confirm this character. Select the other four characters in the same way. After selecting all the characters, press OK twice to store.

c) Fine tune the broadcast reception. Normally the automatic fine tuning (AFT) will give the best possible picture, however you can manually fine tune the TV to obtain a better picture reception in case the picture is distorted.

To do this: while watching the channel (TV Broadcast) you wish to fine tune, select the AFT option and press ♦. Next press ♦ or ♠ to adjust the fine tuning between -15 and +15. Finally press OK twice to store.

d) Skip any unwanted programme numbers when they are selected with the PROG +/buttons.

To do this: Highlighting the Programme option, press the PROG +/- button to select the programme number you want to skip. When the programme you want to skip appears on the screen, select the Skip option and press . Next press • or • to select Yes. Finally press OK twice to confirm and store.

To cancel this function afterwards, select "No" instead of "Yes" in the step above.

continued...

GB

# **Teletext**



Teletext is an information service transmitted by most TV stations. The index page of the teletext service (usually page 100) gives you information on how to use the service. To operate teletext, use the remote control buttons as indicated below.



Teletext errors may occur if you use a channel (TV Broadcast) with a weak signal.

#### To switch on Teletext:

After selecting the TV channel which carries the teletext service you wish to view, press 🚍



#### To select a Teletext page:

Input 3 digits for the page number, using the numbered buttons.

- If you make a mistake, retype the correct page number.
- If the counter on the screen continues searching, it is because the page is not available. If this is the case, input another page number

#### To access the next or preceding page:

Press PROG + ( ) or PROG - ( ).

#### To superimpose teletext on to the TV:

Whilst you are viewing teletext, press (a). Press it again to cancel teletext mode.

#### To freeze a teletext page:

Press • Press it again to cancel the freeze.

#### To reveal concealed information (e.g. answer to a guiz):

Press (H)/(2). Press it again to conceal the information.

#### To select a sub page:

A teletext page may consist of several sub pages. In this case the page number that appears on the upper left corner will change from white to green and one or more arrows will appear next to the page number. Repeatedly press the  $\blacklozenge$  or  $\blacklozenge$  buttons on the remote control to watch the desired sub page.

#### To Switch Off Teletext: .

Press 🔘 .

#### Fastext

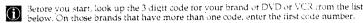
Fastext service lets you access Teletext pages with one button push.

When you are in Teletext mode and Fastext is broadcast, a colour coded menu appears at the bottom of the teletext page. Press the appropriate coloured button (red, green, vellow or blue) to access the page corresponding to your menu choice.

GB

# Remote Control Configuration for VCR/DVD

In it's default condition this remote control will operate the basic functions of this Sony TV, Sony DVDs and most Sony VCRs. To control VCRs and DVDs of other manutacturers (and some Sony VCR models), please complete the following steps:



1 Press the Media Selector button on the remote control repeatedly until the required green light (VCR or DVD) is lit.

If Media Selector is on TV position, code numbers will not be stored.

2 Before the green light goes out, press and hold the yellow button for approximately 6 seconds until the green light starts flashing.

Whilst the green light is flashing, enter all three digits of the code for your brand of VCR or DVD using the number buttons on the remote control.

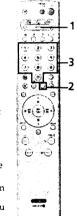
If your selected code is entered correctly, all three green lights will be lit momentarily.

4 Turn on your VCR or DVD and check that the main functions work.



- If your device is not working or some of the functions do not work please check that you entered the correct code set or try the next code listed against the brand.
- Your brand codes may be lost if weak batteries are not replaced within a few minutes. To reset your brand of DVD or VCR please repeat the above steps. A small label is added inside the battery door to allow you to record your brand codes.
- · Not all brands are covered and not all models of every brand may be covered.

**DVD Brand List** 



#### **VCR Brand List**

	2.5 (		
Brand	Code	Brand	Code
SONY (VHS)	301, 302, 303, 308, 309	SONY	001
SONY (BETA)	303, 307, 310	AIWA	021
SONY (DV)	304, 305, 306	DENON	018, 027, 1020, 002
AIWA	325, 331, 351	GRUNDIG	009, 028, 023, 024, 016, 003
AKAI	326, 329, 330	HITACHI	025, 02e, 015, 004
DAEWOO	342, 343	IVC	006, 017
GRUNDIG	358, 355, 360, 361, 320, 351	KENWOOD	008
HITACHI	327, 333, 334	LG	015, 014
IVC	314, 315, 322, 344, 352, 353,	LOEWE	009, 028, 023, 024, 016, 003
	354, 348, 349	MATSUI	013, 016
LG	332, 338	ONKYO	022
LOEWE	358, 355, 360, 361, 320, 351	PANASONIC	018, 027, 020, 002
MATSUI	356, 357	PHILIPS	009, 028, 023, 024, 016, 003
ORION	328	PIONEER	004
PANASONIC	321, 323	SAMSUNG	011, 014
PHILIPS	311, 312, 313, 316, 317, 318,	SANYO	007
	358, 359	SHARP	019, 027
SAMSUNG	339, 340, 341, 345	THOMSON	012
SANYO	335, 336	TOSHIBA	003
SHARP	324	YAMAHA	018, 027, 020, 002
THOMSON	319, 350		
TOSHIBA	337		
	Brand SONY (VHS) SONY (BETA) SONY (BETA) SONY (BUY) AIWA AKAI DAEWOO GRUNDIG HITACHI JVC LOEWE MATSUI ORION PANASONIC PHILIPS SAMSUNG SANYO SHARP THOMSON	SONY (VHS) 301, 302, 303, 308, 309 SONY (BETA) 303, 307, 310 SONY (DV) 304, 395, 306 AIWA 325, 331, 351 AKA1 326, 329, 330 DAEWOO 342, 343 GRUNDIG 358, 355, 360, 361, 320, 351 HITACHI 327, 333, 334 JVC 314, 315, 322, 344, 352, 353, 354, 348, 349 LG 358, 355, 360, 361, 320, 351 MATSUI 36, 357 ORION 328 PANASONIC 321, 323 PHILIPS 311, 312, 313, 316, 317, 318, 358, 359 SAMSUNG 339, 340, 341, 345 SANYO 339, 340, 341, 345 SANYO 339, 340, 341, 345 SHARP 324 THOMSON 319, 350	Brand         Code         Brand           SONY (VHS)         301, 302, 303, 308, 309         SONY           SONY (BETA)         303, 307, 310         AIWA           SONY (DV)         304, 305, 306         DENON           AIWA         325, 331, 351         GRUNDIG           AKAI         326, 329, 330         HITACHI           DAEWOO         342, 343         IVC           GRUNDIG         358, 355, 360, 361, 320, 351         KENWOOD           HITACHI         327, 333, 334         LG           IVC         314, 315, 322, 344, 352, 353,         LOEWE           JS4, 348, 349         MATSUI           LOEWE         358, 355, 360, 361, 320, 351         PANASONIC           MATSUI         356, 357         PHILLIPS           ORION         328         PHONEER           PANASONIC         321, 323         SAMSUNG           PHILIPS         311, 312, 313, 316, 317, 318,         SANYO           SANYO         339, 340, 341, 345         THOMSON           SANYO         335, 336         TOSHIBA           THOMSON         319, 350

# **Specifications**

#### TV system:

#### Colour system:

SECAM, NTSC 3.58, 4.43 (only Video In)

#### Channel Coverage:

I: UHF B21-B69

#### Picture Tube:

Flat Display FD Trinitron WIDE:

- KV-28FQ70U: 28" (approx. 71 cm mesaured diagonally).
- KV-32FQ70U: 32" (approx. 82 cm mesaured diagonally).

#### **Rear Terminals**

**3** 21-pin scart **3** 21-pin scart connector

(CENELEC standard) including audio/video input, RGB input, TV audio/video output.

**3** 21-pin Scart **2** 21-pin Scart connector

(CENELEC standard) including audio / video input, RĞB input, monitor audio/video output.

**3**/**3** 21-pin Scart (SMARTLINK) connector (CENELEC

standard) including audio / video input, S video input, selectable audio / video output and Smartlink interface.

G- audio outputs (Left/ Right) - phono jacks

#### Front Terminals

€3 4 S Video input - 4 pin

€ 4 video input – phono

audio input - phono headphones jack

# Sound Output:

2 x 20 W music power) 2 x 10 W (RMS)

#### Woofer:

30 W (music power) 15 W (RMS)

#### **Power Consumption:**

- KV-28FQ70U: 125 W
- KV-32FO70U: 130 W

#### Standby Power Consumption:

0.3 W

#### Dimensions (w x h x d):

- KV-28FQ70U: approx. 789 x 533 x 521 mm.
- KV-32FQ70U: approx. 910 x 586 x 586 mm.

#### Weight:

- KV-28FO70U: approx. 46.5 Kg.
- KV-32FO70U: approx. o4 Kg.

#### Accessories supplied:

1 Remote Control (RM-938) 2 Batteries (IEC designated, AA size)

#### Other features:

- 100 Hz picture, Digital Plus.
- Teletext, Fastext, TOPtext (250 page TEXT memory).
- · Sleep Timer.
- SmartLink (direct link) between your TV set and a compatible VCR. For more information on SmartLink. please refer to the Instruction Manual of your VCR).
- Dolby Virtual.
- BBE Digital.
- PIP.
- · Auto Format.
- ACI (Auto Channel Installation).

GB

Design and specifications are subject to change without notice.

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# Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark) and no sound.	<ul> <li>Check the aerial connection.</li> <li>Plug the TV in and press the ① button on the front of the TV.</li> <li>If the standby indicator ② is on, press TV I/O button on the remote control.</li> </ul>
Poor or no picture (screen is dark), but good sound.	• Using the menu system, select the "Picture Adjustment" menu and select "Reset" to return to the factory settings (see page 9).
No picture or no menu information from equipment connected to the Scart connector.	<ul> <li>Check that the optional equipment is on and press the         button repeatedly on the remote control until the         correct input symbol is displayed on the screen (see page 21).     </li> </ul>
Good picture, no sound.	<ul> <li>Press the ∠ + button on the remote control.</li> <li>Check that "TV Speakers" is "On" in the "Sound Adjustment" menu (see page 10).</li> <li>Check that headphones are not connected.</li> </ul>
No colour on colour programmes.	• Using the menu system, select the "Picture Adjustment" menu and select "Reset" to return to factory settings (see page 9).
When you switch on the TV the last channel you were watching before switching the TV off does not appear.	This is not a malfunction. Press the number buttons on the remote control to select the desired channel.
Distorted picture when changing programmes or selecting teletext.	Turn off any equipment connected to the Scart connector on the rear of the TV.
Wrong characters appear when viewing NexTView.	Use the menu system to enter the "Language" menu (see page 13) and select the same language that NexTView is broadcast in.

continued...

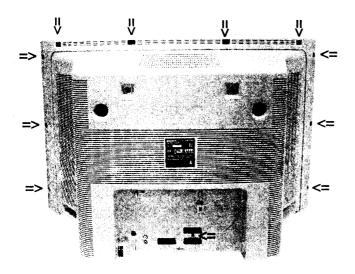
Problem	Solution
Picture slanted	• Using the menu system, select the "Picture Rotation" option in the "Detail Set Up" menu to correct the picture slant (see page 16).
Noisy picture when viewing a TV channel.	<ul> <li>Using the menu system, select the "Manual Programme Preset" menu and adjust Fine Tuning (AFT) to obtain better picture reception (see page 15).</li> <li>Using the menu system, select the "Noise Reduction" option in the "Picture Adjustment" menu and select "Auto" to reduce the noise in the picture (see page 19).</li> </ul>
Remote control does not function.	<ul> <li>Check that the Media Selector on the remote control is set to the device you are using (VCR, TV or DVD).</li> <li>If the remote control does not operate the VCR or DVD even when the Media Selector has been set correctly. Enter the necessary code set as explained in the "Remote Control Configuration for VCR/DVD" chapter of this instruction manual (see page 22).</li> <li>Replace the batteries.</li> </ul>
The standby indicator <b>o</b> on the TV flashes.	Contact your nearest Sony service centre.

If you continue to experience problems, have your TV serviced by qualified personnel. Never open the casing yourself.



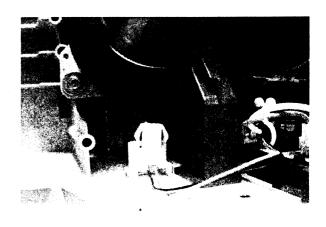
# **SECTION 2 DISASSEMBLY**

# 2-1. Rear Cover Removal



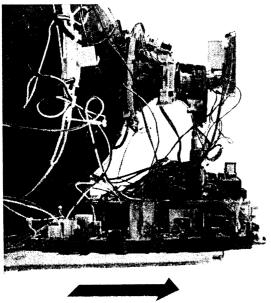
Remove the rear cover fixing screws indicated and pull the rear cover backwards away from the set.

# 2-2. Speaker Connector Disconnection

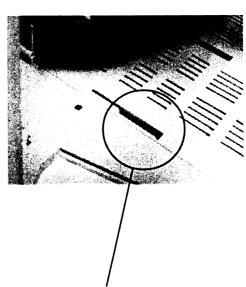


Before completely removing the rear cover disconnect the speaker connector which is located on the inside of the set.

# 2-3. Chassis Removal and Refitting

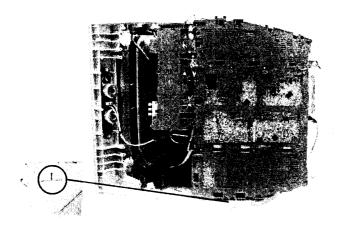


To remove lift the main bracket rear slightly and slide the chassis away from the beznet. Ensure that the interconnecting leads are released from their purse locks to prevent damage being caused.



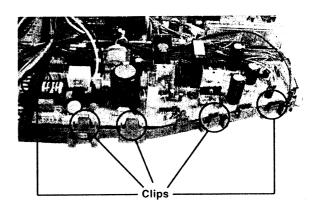
When refitting the chassis ensure that the main bracket is located in the beznet guide slots before sliding the chassis forwards. Refit the inter-connecting leads in their respective purse locks.

# 2-4. Service Position



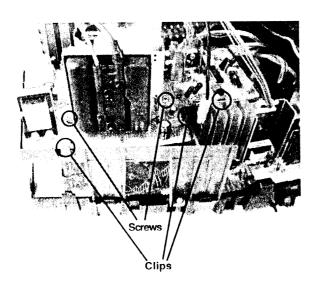
To place the chassis in the service position, insert the main bracket firmly into the T-slot located on the left corner of the beznet as indicated (see inset). To gain access to the underside of the boards follow the instructions on page 17. [Removal and Replacement of the main bracket bottom plates].

## 2-5. G Board Removal



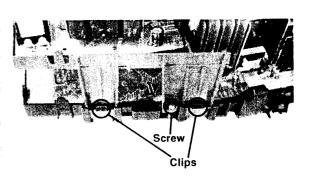
To remove the G Board release the clips circled and ease the board gently away from the support bracket.

# 2-6. D2 Board Removal



To remove the D2 board remove the two screws circled, release the clips circled and ease the board gently away from the support bracket.

## 2-7. D Board Removal



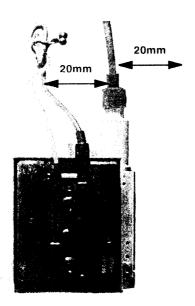
To remove the D board first remove the D2 bracket by removing the two screws (one on each side of the bracket) and releasing the four clips (two on each side of the bracket). The D board can then be removed using the same method as the G board.

## 2-8. M2 Board Removal



To remove the M2 Board gently release the two clips with a screwdriver and remove the board from its socket vertically.

# 2-10. Wire Dressing



Ensure that wires do not touch heatsinks and high temperature hotspots. All wires must be kept at a minimum distance of 20mm away from the EHT lead

# 2-9. Service Connector for M2 Board



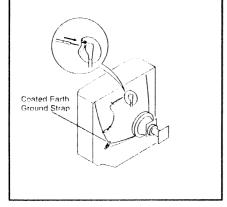
Extender Board Assembly A-1642-293-A

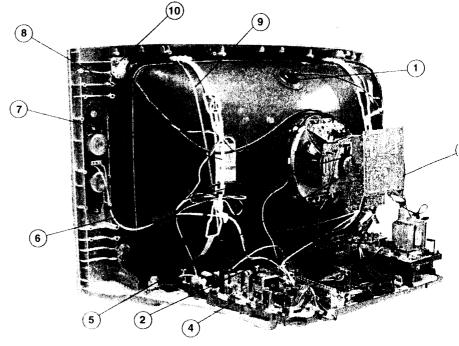
If the M2 Board needs to be removed for testing when the chassis is placed in its service position, it would be necessary to use an extender board and extension cable as indicated above.

The Extender board and extension cable are available as a service part by ordering the part number as indicated.

# WARNING: BEFORE REMOVING THE ANODE CAP

High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT *before* attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.

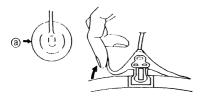




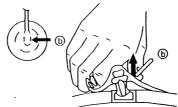
- 1. Discharge the anode of the CRT and remove the anode cap.
- Unplug all interconnecting leads from the Deflection yoke, neck assy, degaussing coils and CRT grounding strap.
- 3. Remove the C Board from the CRT.
- 4. Remove the chassis assembly.
- 5. Loosen the Neck assembly fixing screw and remove.
- 6. Loosen the Deflection yoke fixing screw and remove.
- Place the set with the CRT face down on a cushion and remove the Degaussing Coil holders.
- 8. Remove the Degaussing Coils.
- 9. Remove the CRT grounding strap and spring tensioners.
- Unscrew the four CRT fixing screws [ located on each CRT corner ] and remove the CRT.
   [Take care not to handle the CRT by the neck.]

# Removal of the Anode-Cap

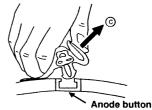
# REMOVAL PROCEDURE.



(1) Turn up one side of the rubber cap in the direction indicated by the arrow (a)



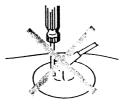
2) Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)

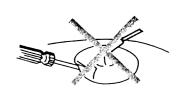


When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ©

# How to handle the Anode-Cap

- To prevent damaging the surface of the anode-cap do not use sharp materials.
- Do not apply too great a pressure on the rubber, as this may cause damage to the anode connector.
- A metal fitting called a shatter book terminal is fitted inside the rubber cap.
- Do not turn the rubber foot over excessively, this may cause damage if the shatter hook sticks out.



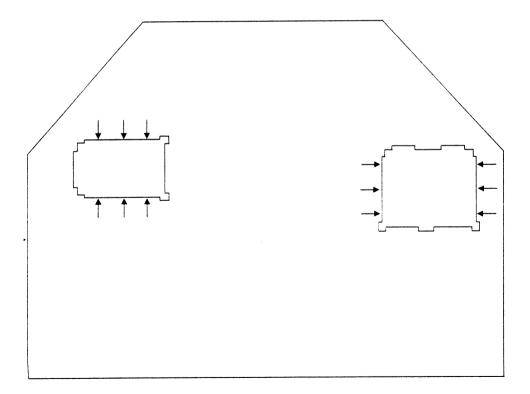


# REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

# (1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the printed wiring boards, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations indicated by the arrows.

**Note:** There are 2 plates fitted to the main bracket. Only remove the necessary plate to gain access to the printed wiring board.





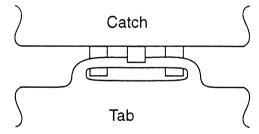
# For safety reasons, on no account should the plates be removed and not refitted after servicing.



# (2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.

Please note that the plates need to be rotated 180 degrees from their cut position to allow the tabs to be fitted into their catch positions.



# **SECTION 3 SET-UP ADJUSTMENTS**

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to the following settings:

Contrast	 normal
Brightness	 normal

# Carry out the adjustments in the following order:

- 3-1. Beam Landing.
- 3-2. Convergence.
- 3-3. Focus
- 3-4. White Balance.

Note: Test equipment required.

- Color bar/pattern generator.
- 2. Degausser.
- Oscilloscope.
- 4. Digital multimeter.

# 3-1. Beam Landing

## Preparation:

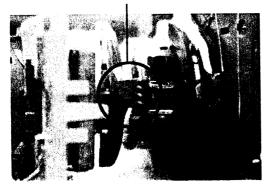
- 1. In order to reduce the influence of geomagnetism on the set's picture tube, face it in an easterly or westerly direction.
- 2. Switch on the TV set's power and degauss with a degausser.

## (1) Adjustment of Correction Magnet for Y-Splitting Axis.

- 1. Input a crosshatch signal from the pattern generator.
- Set the Picture control to minimum and confirm that the Brightness control is set to normal.
- 3. Position the neck assembly as indicated in Fig.3-2.
- Loosen the deflection yoke fixing screw.
- 5. Move the deflection yoke as far forward as is possible.
- 6. Adjust the upper and lower pin symmetrically by opening or closing the Y-splitting axis correction magnets located on the neck assembly. [See Fig 3-3]
- 7. Return the deflection yoke to its original position and re-tighten its fixing screw.

Fig.3-1

# Y-splitting axis correction magnet



#### Caution:

High voltages are present on the Deflection yoke terminals - take care when handling the Deflection yoke whilst carrying out adjustments.

# (2) Landing

**Note:** Before carrying out the following adjustments adjust the magnets as indicated [See Fig. 3-4].

- 1. Input a crosshatch signal from the signal generator.
- Rough-adjust the focus and horizontal convergence.
- 3. Switch from the crosshatch pattern to an all-red pattern.
- Move the deflection yoke backwards and adjust with the purity magnet so that the red is at the centre and it aligns symmetrically [See Fig. 3-5].
- Move the deflection yoke forward to the point where the entire screen just becomes red [Mark its position].
- 6. Move the deflection yoke further forward until the screen just changes colour at the edges. [Mark its position]
- Position the deflection yoke between the two marks indicated above
- 8. Input a crosshatch pattern from the pattern generator and rotate the deflection yoke so that the horizontal lines are parallel with the top and bottom of the screen.
- When the position of the deflection yoke has been determined, fasten it with its fixing screw.
- Switch the pattern generator to green then blue and confirm the purity.
- 11. If the beam does not land correctly in all the corners of the screen, use disk magnets to correct it. [Confirm the corner landing for green and blue]

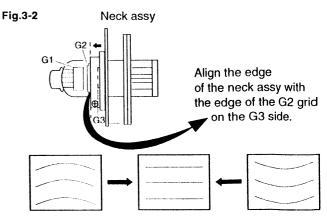
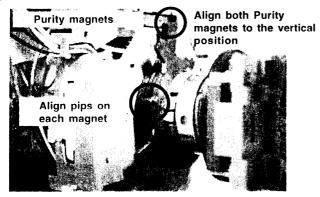


Fig.3-3

Fig.3-4



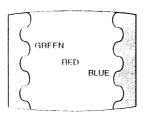
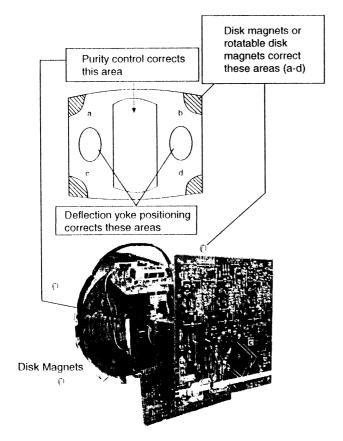
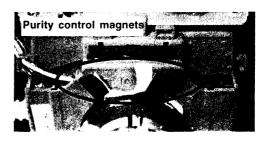


Fig.3-5

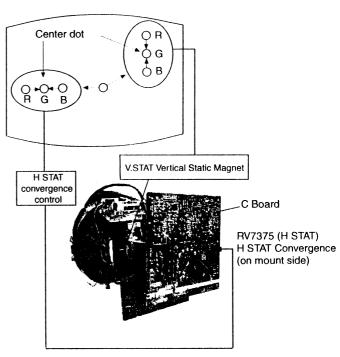




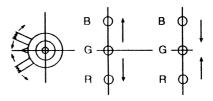
# 3-2. Convergence

## (1) Screen centre convergence [Static convergence]

- 1. Input a dot pattern signal from the pattern generator.
- 2. Normalize the picture setting.
- 3. [Moving vertically], adjust the V.STAT magnet so that the vertical red, green and blue dots coincide at the centre of the screen.



By opening or closing the V.STAT magnet, the red green and blue dots move in the direction indicated below.



**Note:** Do not adjust the H.STAT by rotating the V.STAT magnets as this can affect the focus setting.

- Correction for HMC [Horizontal mis-convergence] and VMC [Vertical mis-convergence] by using the BMC [Hexapole] magnet.
- a). HMC correction by BMC [Hexapole] magnet and movement of the electron beam.

HMC correction(A)

A < B R G B

O O O

A > B R G B

A > B R G B

A > B R G B

O O O

A = B R G B

O O O

A = B R G B

b). VMC correction by BMC [Hexapole] magnet and movement of the electron beam.

assembly to the Deflection yoke.

HTIL correction can be performed by adding a THL correction

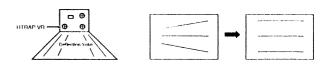




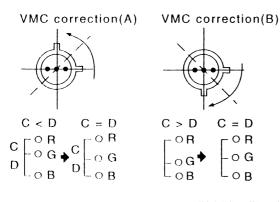
# **TLV Adjustment**



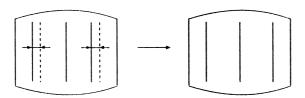
# **H-TRAP Adjustment**



The H-TRAP should not be adjusted unless absolutely necessary as it affects the TLV settings.

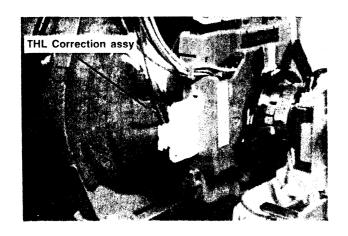


# **HAMP Adjustment**

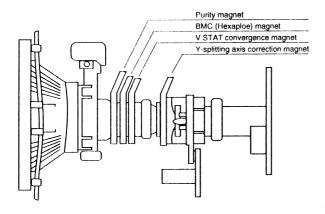


Adjust the HAMP using HAMPL and HAMPR registers in the Dynamic Convergence section of the service menu.

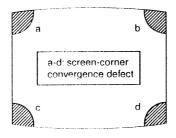
# **HTIL** Adjustment

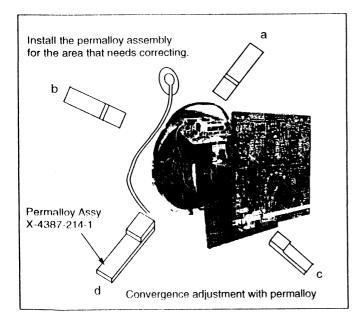


## Layout of each control



**Note:** If you are unable to adjust the corner convergence properly, this can be corrected with the use of permalloy magnets.

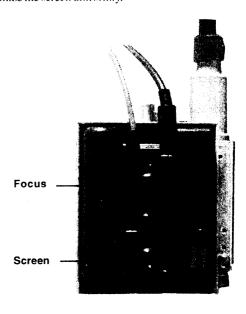




# 3-3. Focus Adjustment

- 1. Receive a television broadcast signal.
- 2. Normalize the picture setting.
- Adjust the focus control located on the flyback transformer to obtain the best focus at the centre of the screen.
   Bring only the centre area of the screen into focus, the magenta-

ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



# 3-4. Screen (G2), White Balance

[Adjustment in the service mode using the remote commander]

# G2 adjustment

- 1. Input a dot signal from the pattern generator.
- 2. Set the Picture, Brightness and Colour to minimum.
- Apply 165V DC from an external power supply to the R, G and B cathodes of the CRT.
- Whilst watching the picture, adjust the G2 control [SCREEN] located on the flyback transformer to the point just before the flyback return lines disappear.

# White balance adjustment for TV mode

- Input an all-white signal from the pattern generator.
- 2. Program the Remote Commander for operation in Service Mode. [See Page 22].
- 3. Enter into the 'Service Mode' by pressing 'VIDEO' button twice and 'MENU' on the Service Commander.
- Select 'Service' from the on screen menu display and press 'Right Arrow'.
- 5. The 'Service' menu will appear on the screen.[See Page 23]
- 6. Set the 'Contrast' to MAX.
- 7. Set the 'R-Drive' to 50.
- 8. Adjust the 'G-Drive' and the 'B-Drive' so that the white balance becomes optimum.
- 9. Press the 'OK' button to write the data for each item.
- 10. Set the 'Contrast' to MIN.
- 11. Set the 'R-Cutoff' to 29.
- 12. Adjust the 'G-Cutoff', and the 'B-Cutoff' with the left and right buttons on the remote commander so that the white balance becomes optimum.
- 13. Press the 'OK' button to write the data for each item.

# **SECTION 4 CIRCUIT ADJUSTMENTS**

# 4-1. Electrical Adjustments

Service adjustments to this model can be performed using the supplied remote Commander RM-938.

# Programming the Remote Commander for Operation in Service Mode

- 1. Press the VCR/TV/DVD button until the TV LED lights.
- 2. Press and hold the yellow button for approx. 5 seconds until the TV LED flashes quickly.



- Press 99999, All three LED's should light.
   The remote commander is now set to Service Mode.
- To return the remote commander to normal operation mode repeat steps 1, and 2, then press 00000. All three LED's should light.

The remote commander is now set to normal mode.

# Setting the TV into Service Mode

- Program the remote commander for operation in Service Mode as described above.
- 2. Turn on the TV main power switch.
- 3. Press the video standby button on the remote commander twice.

'TT\_\_' will appear in the upper right corner of the screen. Other status information will also be displayed.

 Press 'MENU' on the remote commander to obtain the following menu on the screen.

Geometry
Panorama
Service
Scanrate
DAC
PiP
Sound
IF adjust
Error Menu
AE6B Wide v2.21 (Jan 2002)
Factory data 02h 16h
MSP Device : MSP3411G

- Move to the corresponding adjustment item using the up or down arrow buttons on the Remote Commander.
- 6. Press the right arrow button to enter into the required menu item.
- 7. Press the 'Menu' button on the Remote Commander to quit the Service Mode when all adjustments have been completed.

#### Note

After carrying out the service adjustments, to prevent the customer accessing the 'Service Menu' switch the TV set OFF and then ON.

ABL TH (0, 3) 0 ABL MODE (0, 3) 0 P ABL (0, 15) 15 V SIZE (0, 63) 35 V POSITION (0, 63) 33 V COMP (0, 3) 1 V LIN (0, 15) 7 S CORRECTION (0, 15) 7 H SIZE (0, 63) 44 PIN AMP (0, 63) 32 UP CORNERPIN (0, 63) 29 M PIN (0, 3) 2 LO CORNERPIN (0, 63) 29 TRAPEZIUM (0, 15) 2 H POSITION (0, 63) 40 AFC BOW (0, 15) 8 AFC ANGLE (0, 15) 9 LEFT BLK (0, 63) 34 RIGHT BLK (0, 63) 17 V ASPECT (0, 63) 47 AKBTIM1 (0, 3) 2 AKBTIM2 (0, 1) 0 IKR 1 HNG 0 UNG	GEOMETRY		
	ABL MODE P ABL V SIZE V POSITION V COMP V LIN S CORRECTION H SIZE PIN AMP UP CORNERPIN M PIN LO CORNERPIN TRAPEZIUM H POSITION AFC BOW AFC ANGLE LEFT BLK RIGHT BLK V ASPECT AKBTIM1 AKBTIM2 IKR	(0, 3) (0, 15) (0, 63) (0, 63) (0, 15) (0, 15) (0, 63) (0, 63) (0, 63) (0, 63) (0, 63) (0, 15) (0, 63) (0, 63) (0, 63) (0, 63) (0, 63) (0, 63) (0, 63) (0, 63) (0, 63) (0, 63)	0 15 35 33 1 7 7 44 32 29 2 40 8 9 34 17 47 2 0

IF ADJUST	
Automute	1
Audio Gain	0
L Gating	0

SERVICE		
SUB COL SUB HUE SUB SHARP SUB BRIGHT SUB CONT R-DRIVE G-DRIVE B-DRIVE B CUTOFF G CUTOFF B CUTOFF Br TXT Br OSD	(0, 63) (0, 15) (0, 15)	Adj 31 30 13 12 50 Adj Adj 28 24 46 7

DAC			
CONFIG MPIN CONT HLIN HTRAP ROT. COIL PHOCUS PH	(0, 255) (0, 255) (0, 255) (0, 255) (0, 255)	00000000	96 83 127 130 90

	SOUND		
1	M-N	(0, 511)	200
١	M-D	(-128, -1)	-20
١	M-S	(+0, +127)	+20
١	S-M	(+0, +127)	+10
١	D-M	(-128, -1)	-10
	N-M	(0, 1023)	496
١	BBE	(+0, +68)	+28
١	B1	(-96, +96)	+0
١	B2	(-96, +96)	+0
١	B3	(-96, +96)	+0
١	B4	(-96, +96)	+0
١	B5	(-96, +96)	+0
1	SW L	(-128, +0)	+0
	SW F	(+5, +40)	+30
	NICAM C AD	10001	
	NICAM Error	(0, 2047)	0
	Stereo	(-128, +127)	+0
	Status	0000000110	

ERROR MENU			
E02	OCP	(0, 255)	0
E03	OVP	(0, 255)	0
E04	<b>V</b> SYNC	(0, 255)	0
E05	IKR	(0, 255)	0
E06	IIC	(0, 255)	0
E07	NVM	(0, 255)	0
E08	HPROT	(0, 255)	0
E09	TUNER	(0, 255)	0
E10	SOUNDP	(0, 255)	0
E11	-	(0, 255)	0
E12	SCANRATE	(0, 255)	0
E13	DAC	(0, 255)	0
E14	BACKEND	(0, 255)	0
E15	DYN CON	(0, 255)	0
E16	PIP	(0, 255)	0
WORKING TIME			
HOURS			14
MINUTES			7

# Sub Brightness Adjustment

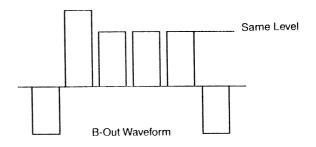
- 1. Input a Monoscope pattern.
- Program the Remote Commander for operation in Service Mode.
   See Page 22 1.
- 3. Press 'VIDEO' 'VIDEO' 13 on the Remote Commander.
- Adjust the 'Sub-Brightness' data so that there is barely a difference between the 0 IRE and 10 IRE signal levels.

# **Sub Contrast Adjustment**

- 1. Input a video signal that contains a small 100% white area on a black background.
- 2. Connect an digital voltmeter to Pin 10 of J7376 [C Board].
- 3. Program the Remote Commander for operation in Service Mode. [See Page 22].
- 4. Adjust the Sub-Contrast [ Using 'VIDEO' 'VIDEO' '11' ] to obtain a voltage of 105 +/- 5V.

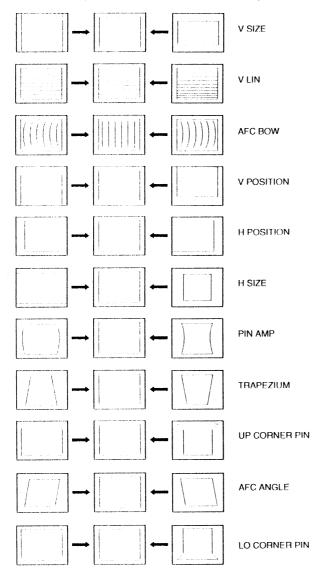
# **Sub Colour Adjustment**

- 1. Receive a PAL colour bar signal.
- 2. Connect an oscilloscope to Pin 6 of CN7001 [A Board].
- 3. Program the Remote Commander for operation in Service Mode. [See Page 22].
- 4. Adjust the 'Sub Colour' [ Using 'VIDEO' 'VIDEO' '12' ] so that the Cyan, Magenta and Blue colour bars are of equal levels as indicated below.



# **Deflection System Adjustment**

- Program the Remote Commander for operation in Service Mode.
   See Page 22 | and enter into the 'Geometry' service menu.
- 2. Select and adjust each item in order to obtain the optimum image.



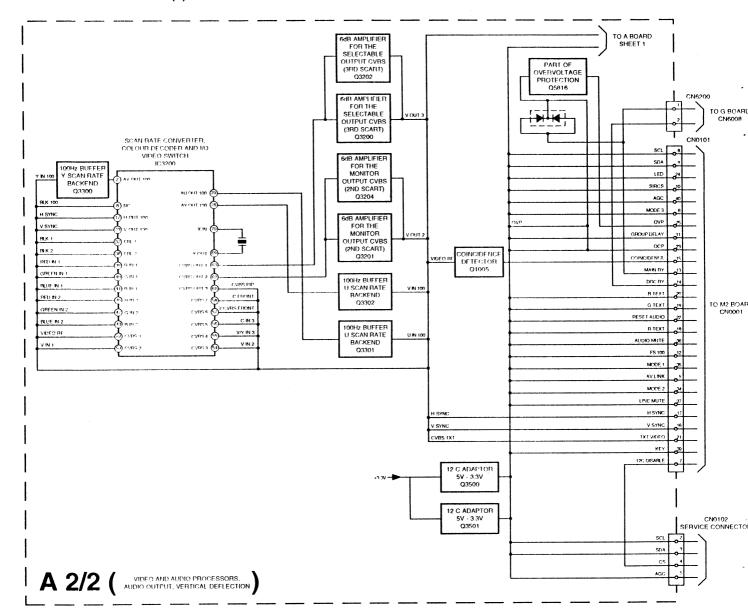
GEOMETRY		
ABL TH ABL MODE P ABL V SIZE V POSITION V COMP V LIN S CORRECTION H SIZE PIN AMP UP CORNERPIN	(0, 63) (0, 3) (0, 15) (0, 15) (0, 63) (0, 63) (0, 63)	0 0 15 35 33 1 7 7 44 32 29 2
M PIN LO CORNERPIN TRAPEZIUM H POSITION AFC BOW AFC ANGLE LEFT BLK RIGHT BLK V ASPECT AKBTIM1	(0, 3) (0, 63) (0, 15) (0, 63) (0, 15) (0, 15) (0, 63) (0, 63) (0, 63) (0, 3)	2 29 2 40 8 9 34 17 47 2
AKBTIM2 IKR HNG VNG	(0, 1)	0 1 0 0

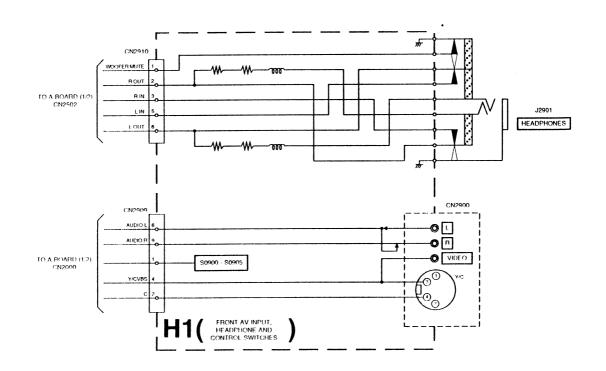
# 4-2.TEST MODE 2:

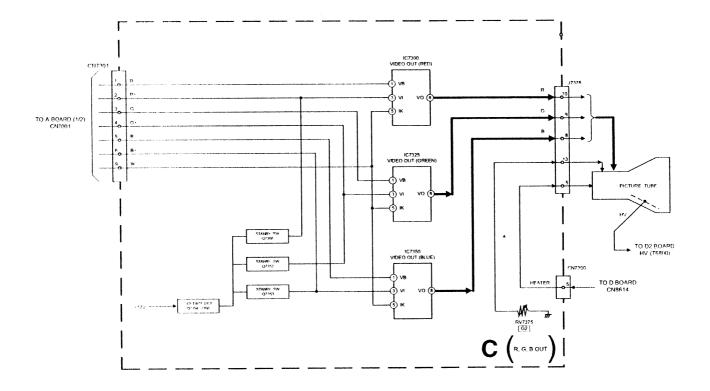
Test Mode 2 is available by rogramming the Remote Commander for operation in Service Mode [As shown on Page 22] then pressing the 'VIDEO' button twice, OSD 'TT' appears. The functions described below are available by selecting the two numbers. To release the 'Test mode 2', press 00, 10, 20 ... or switch the TV set into Stand-by mode.

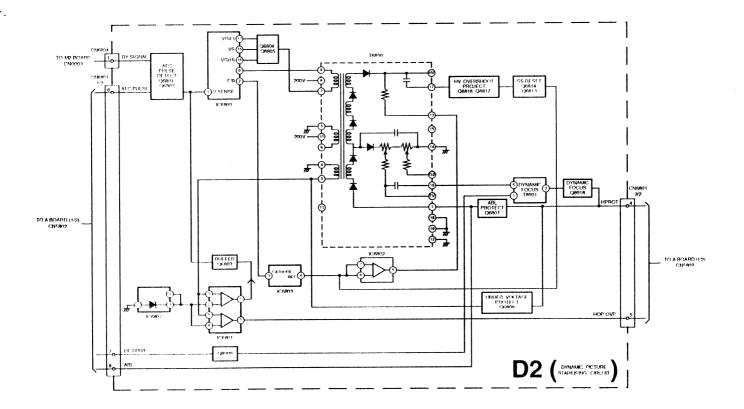
00	'TT' mode off
01	Picture maximum
02	Picture minimum
03	Set speaker/headphone Volume to 35%
04	Set speaker/headphone Volume to 50%
05	Set speaker/headphone Volume to 65%
06	Set speaker/headphone Volume to 80%
07	Ageing mode
08	Shipping Condition
11	Sub picture adjustment
12	Sub colour adjustment
13	Sub Brightness adjustment
14	Text H Position adjustment
15	Rotation Coil Test
16	Picture level 50%
19	Factory Mode Enable/Disable
21	Destination ADEKR
22	Destination BL
23	Destination ADEKR
24	Destination U
25	Destination ADEKR
26	Destination BL
27	Destination ADEKR
28	Destination ADEKR
31	Auto Shutoff Enable/Disable
36	Velocity Modulation (VM) OFF/ON test
41	Re-initialise NVM
43	Select Dual A sound
44	Select Dual B sound
45	Select Mono sound
46	Select Stereo sound
48	Set NVM as non virgin
49	Set NVM as virgin
53	FM Overmodulation Enable/Disable
55	Tuner selection (SONY/ALPS)
59	Select Model 3 Scarts + PIP or 2 Scarts
68	Enable/Disable X26 countermeasure (N problem)
73	Enable Zweiton D/K2 system (6.5/6.74)
74	Enable Zweiton D/K3 system (6.5/5.74)
78	Balance full right
79	Balance full left
87	Local keys test
99	Display Error and Working Time menu

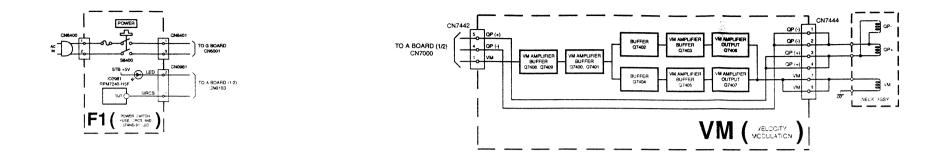
# 5-1. BLOCK DIAGRAMS (2)

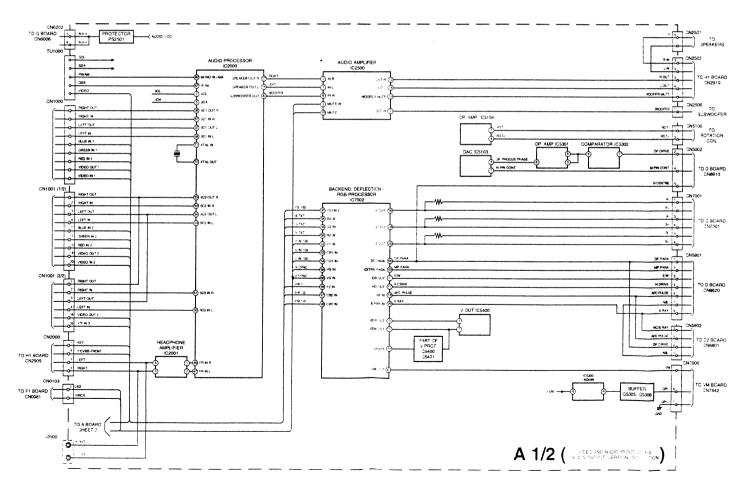


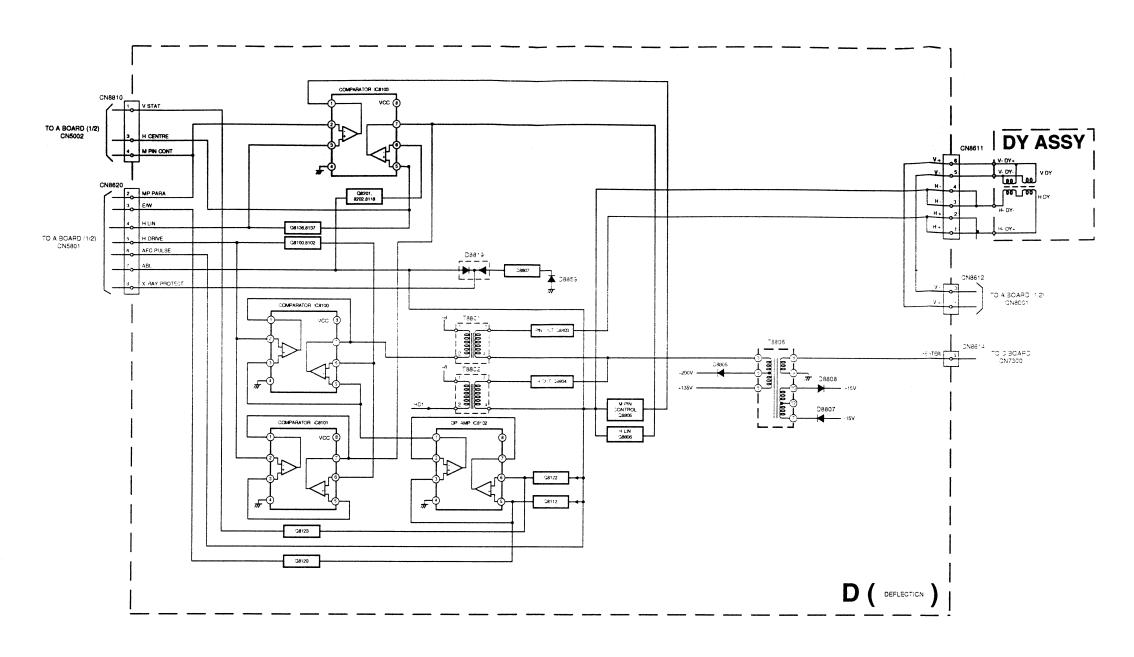


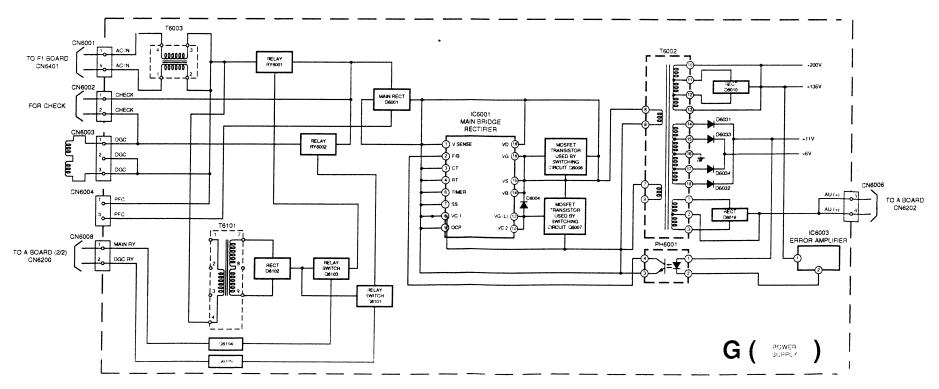




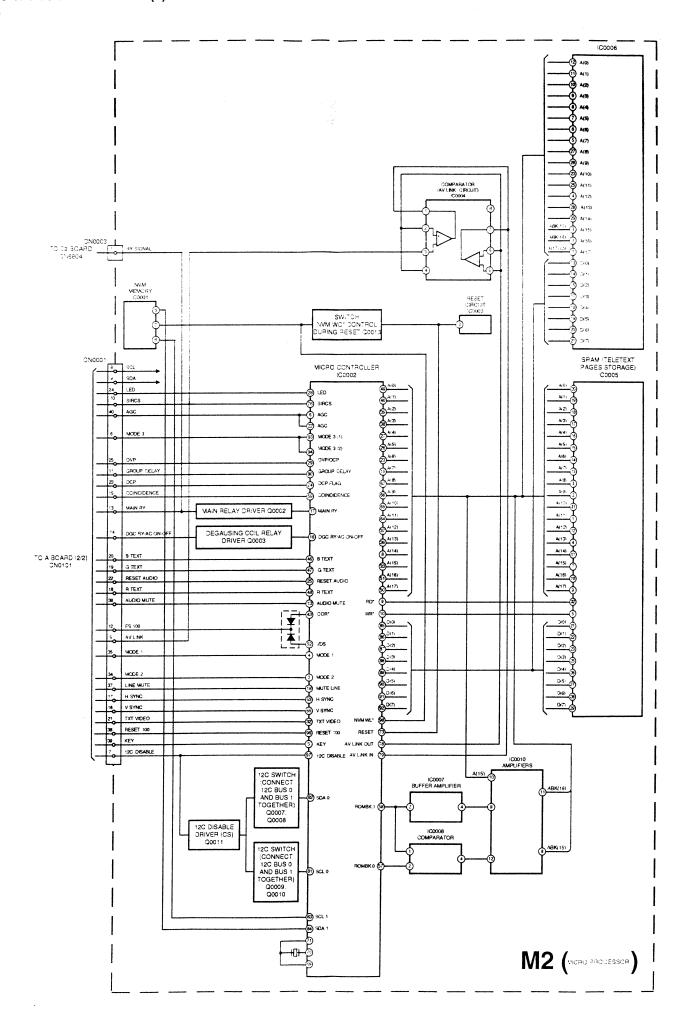




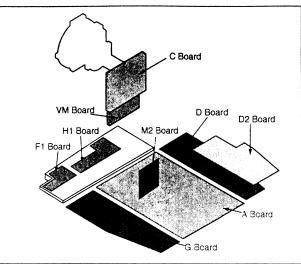




# 5-1. BLOCK DIAGRAMS (4)



# 5-2. CIRCUIT BOARD LOCATION



# 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

#### Note:

- All capacitors are in µF unless otherwise noted.
- pF: μμF 50WV or less are not indicated except for electrolytic types.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5mm Electrical power rating: 1/4W

- Chip resistors are 1/10W
- All resistors are in ohms.
   k = 1000 ohms, M = 1000.000 ohms

: nonflammable resistor.

• fusible resistor.

: internal component.

• : panel designation or adjustment for repair.

- All variable and adjustable resistors have
- characteristic curve B, unless otherwise noted.All voltages are in Volts.
- Readings are taken with a 10Mcnm digital mutimeter.
- Readings are taken with a color par input signal.
- Voltage variations may be noted due to normal production tolerences.

: B + bus.

• = = : B - bus.

• Stock : RF signal path.

• \_\_\_\_ : earth - ground.

• ; earth - chassis.

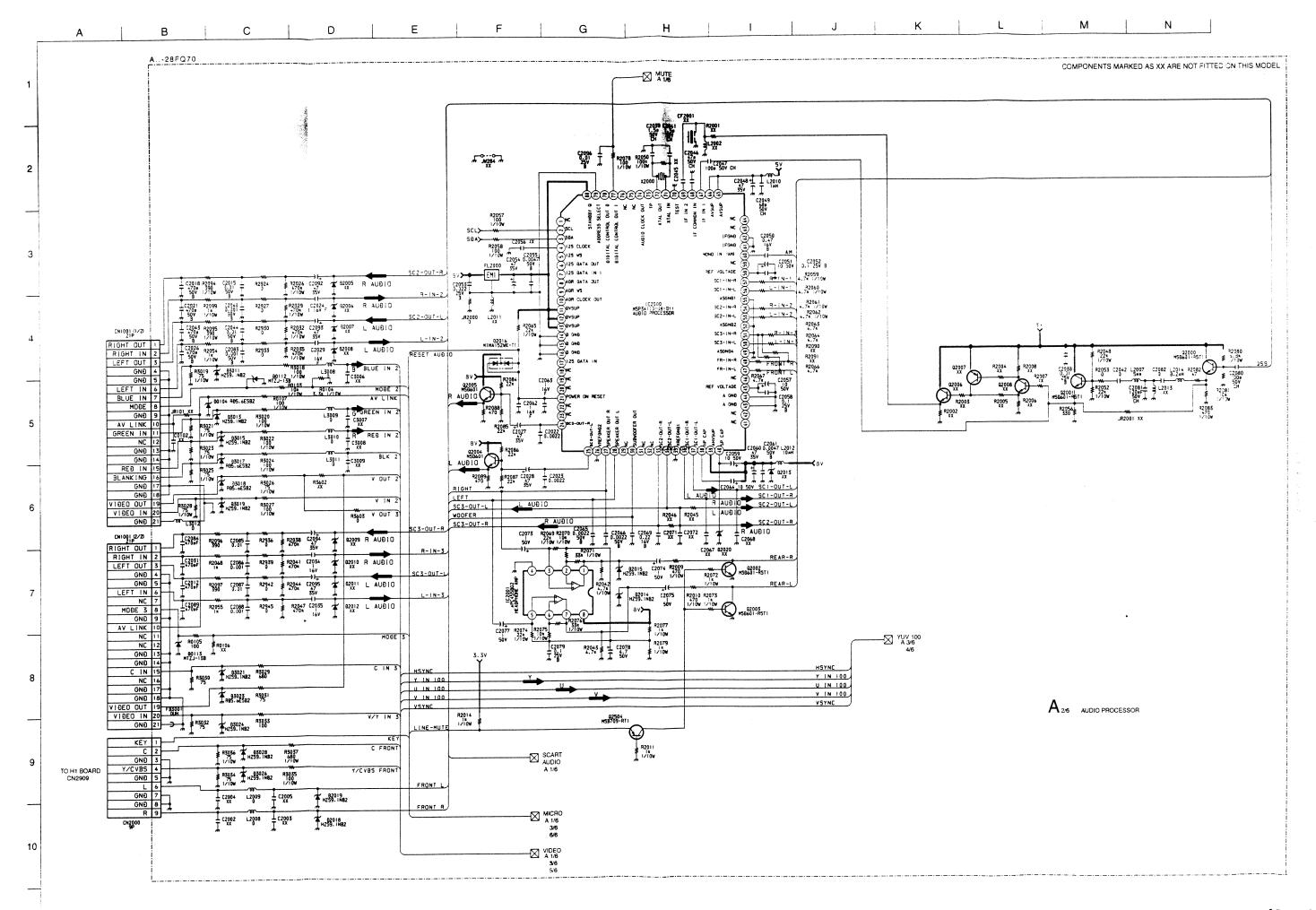
## **Reference Information**

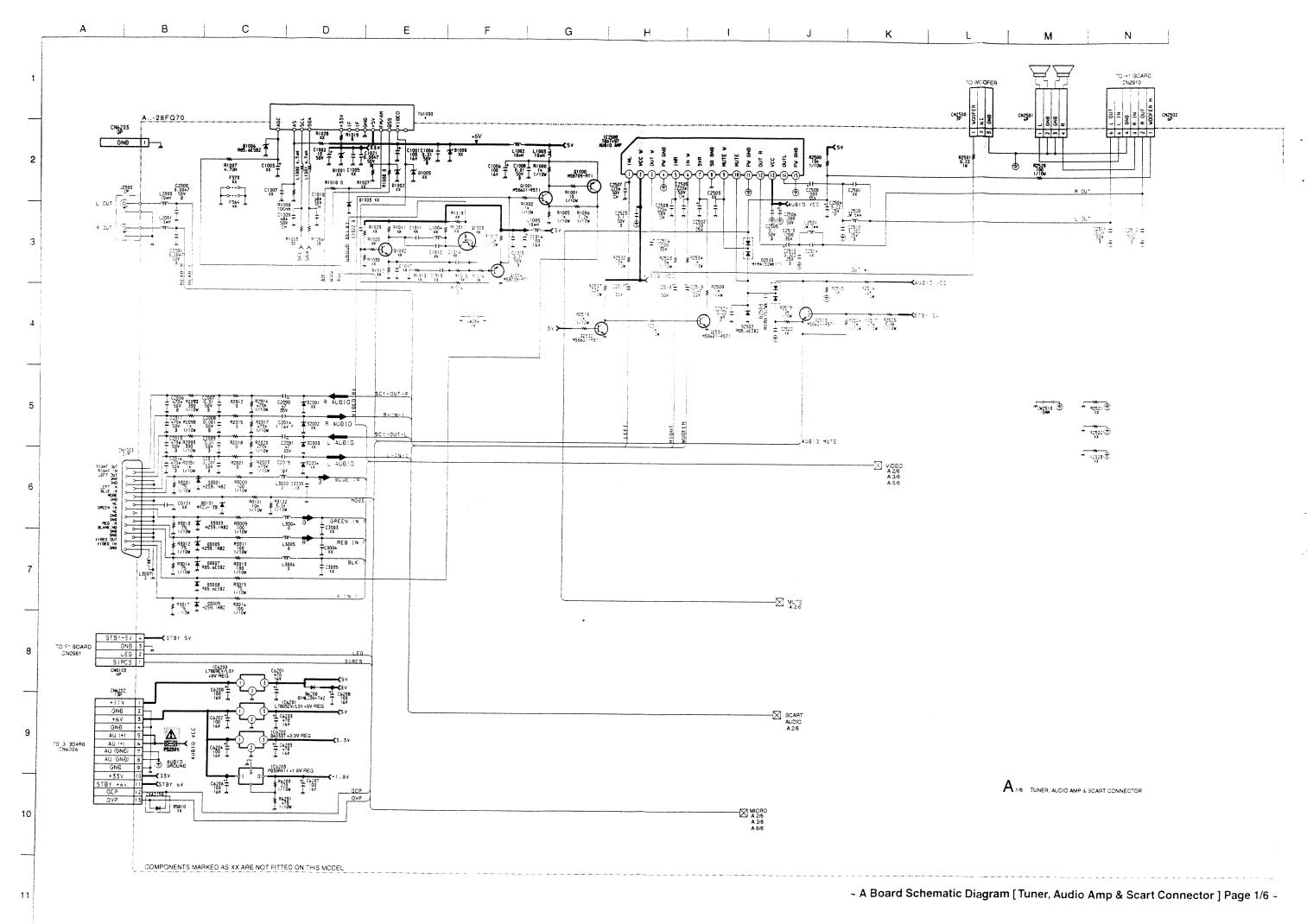
RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NON FLAMMABLE CARBON
	FUSE	: NON FLAMMABLE FUSIBLE
	RS	: NON FLAMMABLE METAL OXIDE
	RB	: NON FLAMMABLE CEMENT
	RW	: NON FLAMMABLE WIREWOUND
	<b>※</b>	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

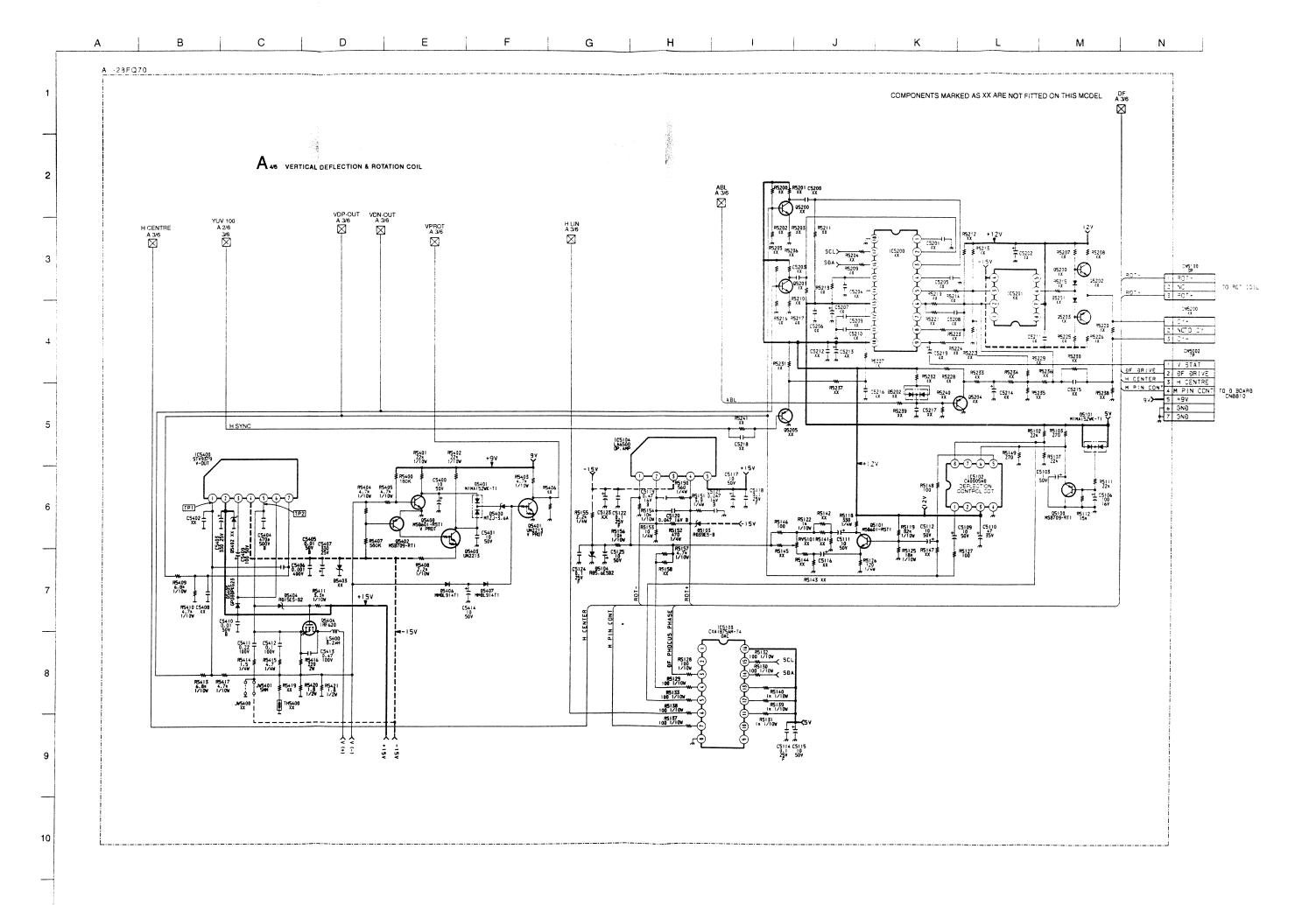
Note: The components identified by shading and marked ∆ are critical for safety. Replace only with the part numbers specified in the parts list.

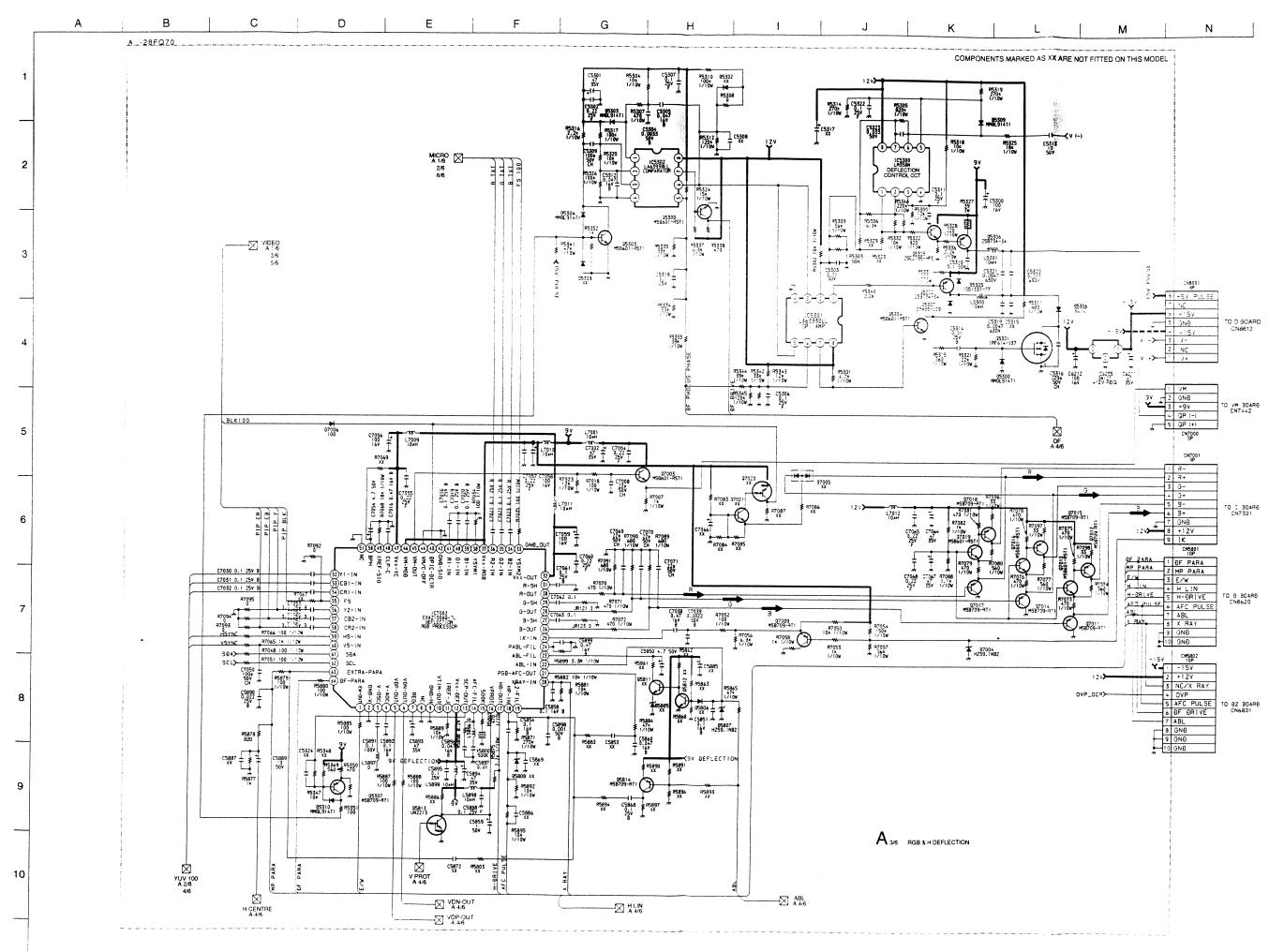
Note: Les composants identifiés par une trame et par une marque ∆ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié. specified.

- 28 -

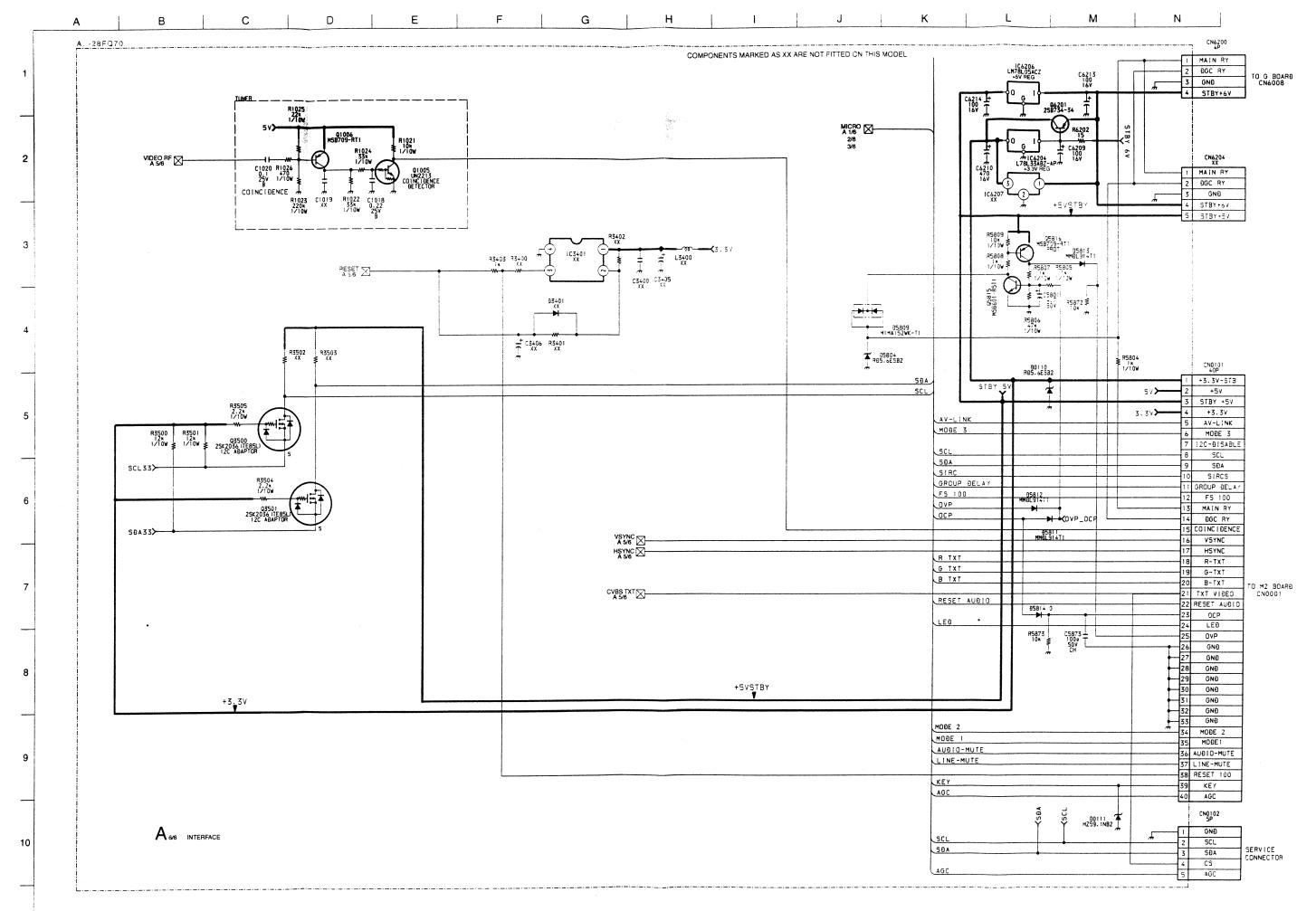


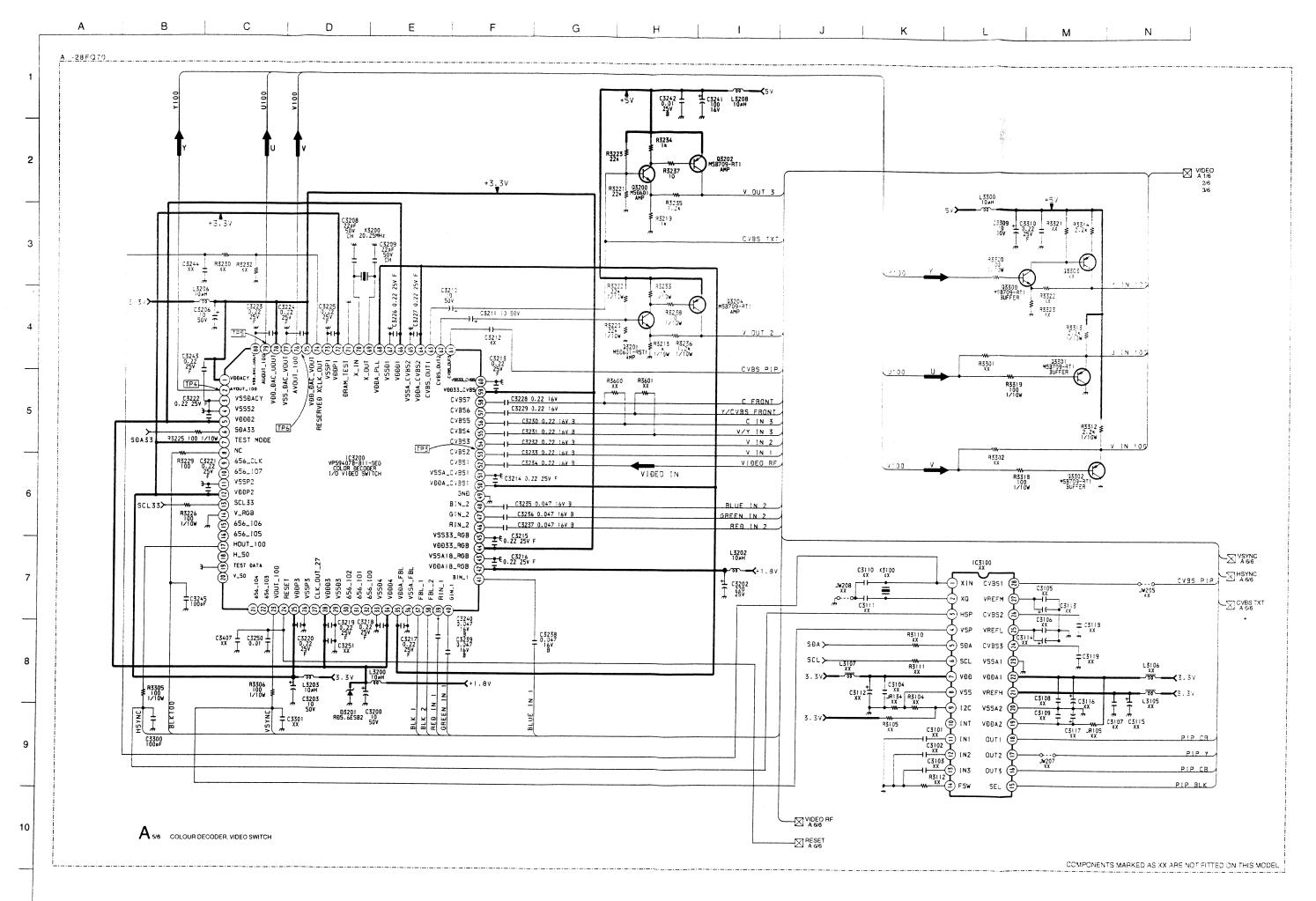




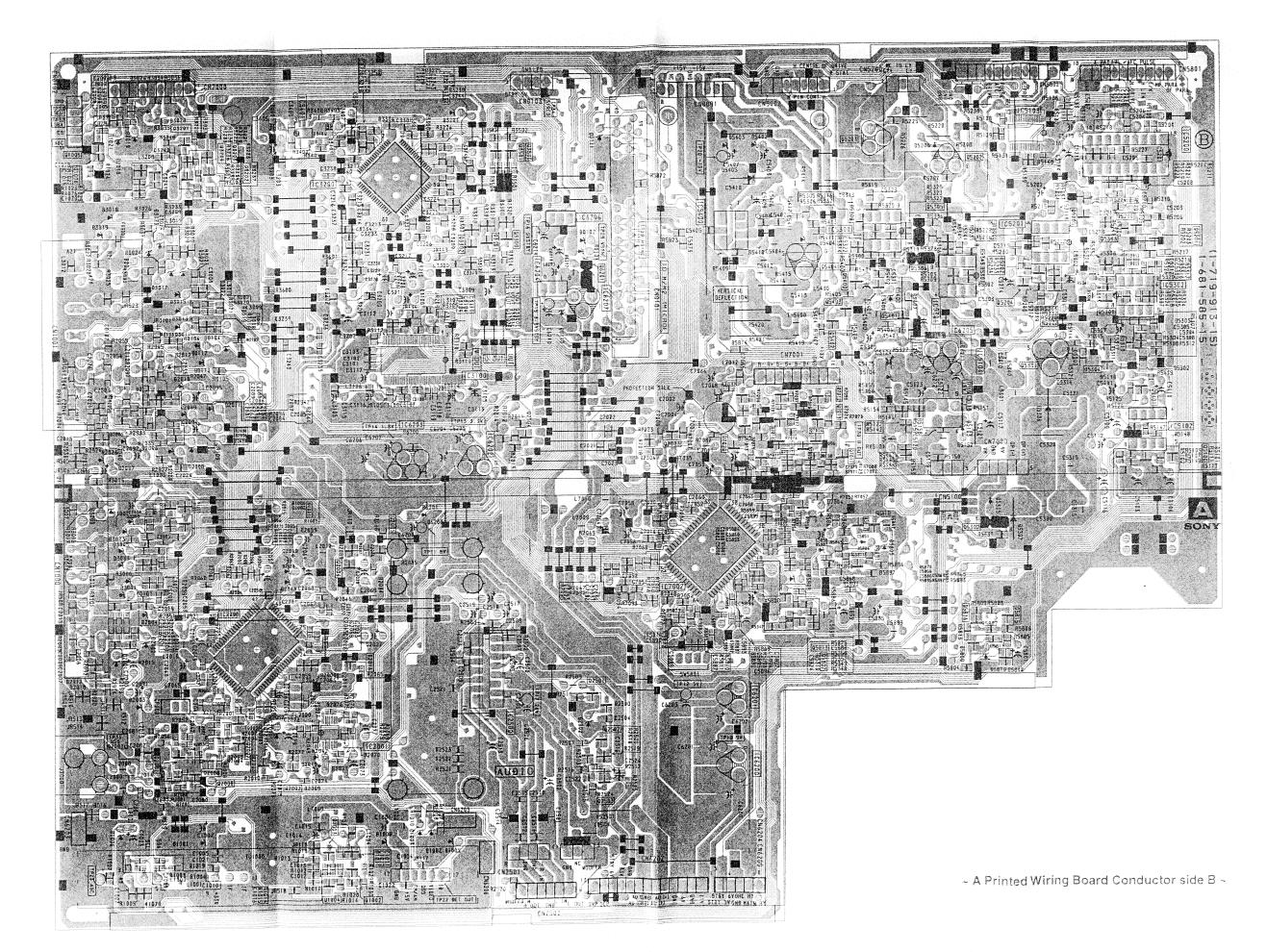


11

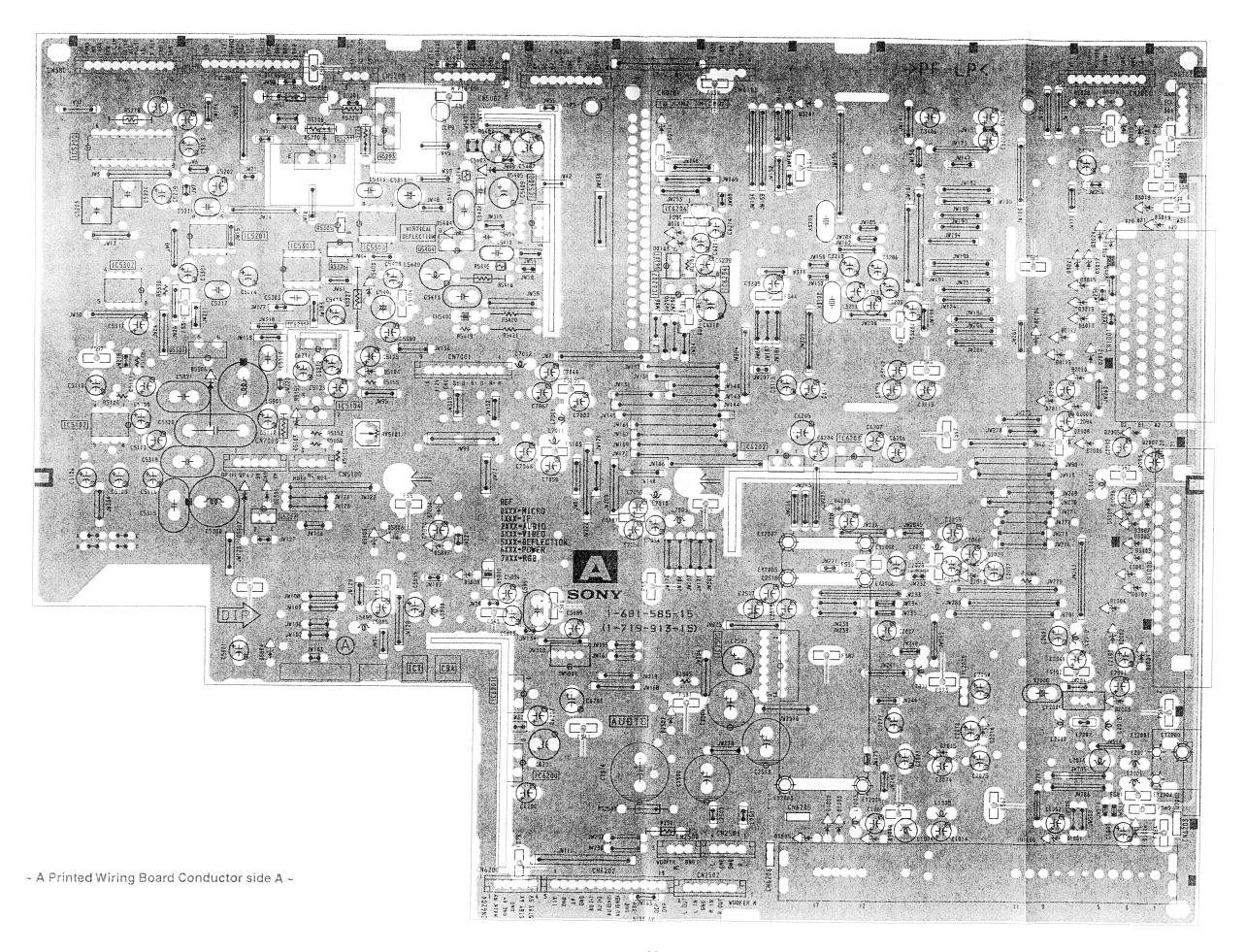




A B C D E F G H I J K L M N



B C D E F G H I J K L M N



### ~ A Board Semiconductor Voltage Table ~

Ref	(0)	(g)	(d)	Ref	(6)	(b)	(c)	Ref	(•)	(b)	(c)	Ref	(•)	(b)	(c)	Ref	(e)	(b)	(c)	Ref	(0)	(b)	(c)
Q3500	2.7	3.3	3.9	Q2002	0	0	4	Q3204	5	4.4	3.4	Q5205	1.9	1.2	0	Q5813	0	7.9	0	Q7015	11.6	10.9	8.8
Q3501	2.7	3.3	4	Q2003	0	0	4	Q3300	0.7	1.3	5	Q5300	0	0.4	2.2	Q5814	0	Ó	0	Q7016	6	6.6	10.9
Q5301	0	5.1	51.2	Q2004	3.3	3.9	8.3	Q3301	1.9	1.2	0	Q5301	5.1	0	51.2	Q5815	0	0	5	Q7017	2.7	2	0
Q5404	0	0	0.5	Q2005	3.3	3.9	8.3	Q3302	1.9	1.2	0	Q5302	8.9	5.7	0	Q5816	5	5	0	Q7018	11.6	10.9	8.6
04			X)	Q2501	0	0	15.2	Q3500	3.3	2.7	3.9	Q5304	0	0.4	5.6	Q7003	5.6	6.2	8.8	Q7019	6	6.6	10.9
Q1001	3.2	3.9	8.3	Q2502	0	0.7	0	Q3501	3.3	2.7	4	Q3400	0	0	0.1	Q7009	3.2	7	0.1	Q7020	8.9	8.9	0
Q1004	1.9	1.3	0	Q2503	0.6	0.6	0.5	Q5101	0	0.4	6.4	Q5401	0	0	7.9	Q7011	2.5	1.9	0	Q7021	2.7	2.7	8.9
Q1005	0	0.5	5	Q3200	1.9	2.5	4.4	Q5201	2.8	3.4	7.9	Q5402	0	0	-11.3	Q7012	11.6	10.9	8.7				
Q1006	5	4.7	1	Q3201	1.9	2.5	4.4	Q5202	0.2	0.8	11.7	Q5403	-13.5	-11.2	-8.3	Q7013	6	6.6	10.9				
32000	4.2	4 9	3.3	Q3202	5	4.4	3.4	Q5203	0.2	0.8	11.7	Q5404	0	0	0.5	Q7014	2.5	1.8	)				

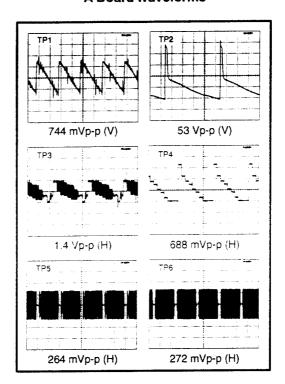
### ~ A Board IC Voltage Table ~

Ret No.	Pin No	Volta (V)	Ref No	Pin No	Volts (V)	Ref No	Pin No	Volta (V)	Ref No	Pin No	Volts (V)
and the Section of	1	3.3	100000000000000000000000000000000000000	5	6.5	State Atti	10	0.4		38	0
	2	3.3		6	7.1		11	1.9		39	4.8
	1 3	1.9	IC5301	7	0.4		12	0.4		40	4.8
4-10-4-11	1 4	2.6		8	12	47	13	0.9		41	4.8
	5	2.5	12 St. 12 11 11 18 1	1	0	700	14	5		42	0
	F 6	1.3		2	5.8		15	2.5		43	0
	7	2		3	5.3		16	0		44	0
	8	. 0		4	1 0		17	3		45	6.3
IC5103	9	3.1	IC5302	5	6.6		18	2.7		46	8.9
106.34	10	3		6	6.5		19	3.9		47	8.9
	11	5		7	0.4		20	0		48	6
2.6	12	5	4.4	8	12		21	6.1	222	49	2.5
1971 ×	13	5		1	1,4	1.00	22	2.7	107000	50	4.1
V. 6	14	0	1 W.	2	13.2		23	8.8	IC7002	51	0
100	15	0		3	-12.5	IC7002	24	0		52	6
	16	5	105400	4	-15.4		25	4.3		53	5.8
	1	6		5	-0.4		26	3.2		54	5.8
	2	6		6	13.7		27	5.2		55	0.4
	3	6	<b>.</b>	7	1.4		28	0.3		56	5.8
	4	0	S. 100 L. 100 C.	1	3.6		29	4.9		57	5.8
(C5300	5	6		2	0	3.0	30	3.4		58	5.8
	6	6		3	4.4	\$7.58 N. C.	31	5.6	1300000	59	0.3
	7	6		4	4.8	•	32	8.9		50	0
	8	12	107002	5	3.5		33	0		61	0
1887 L 2468 L 1	1	: 1.7	1 7 6	6	3.4	.,	34	4.7		62	2.9
Agriculture .	2	8.5		7	7.6	1	35	4.7		63	3.7
IC5301	3	6.5		8	0	1	36	4.7			
*	4	0.5		9	0	7.0	37	8.9			

### ~ A Board Difference Table ~

Ref	KN-28FQ708	KV-28FQ70E	KV-26F070U
TU1000	FRONTEND	FRONTEND	FRONTEND
	BTF-EF411	BTF-EC411	BTF-EU611

### ~ A Board Waveforms ~

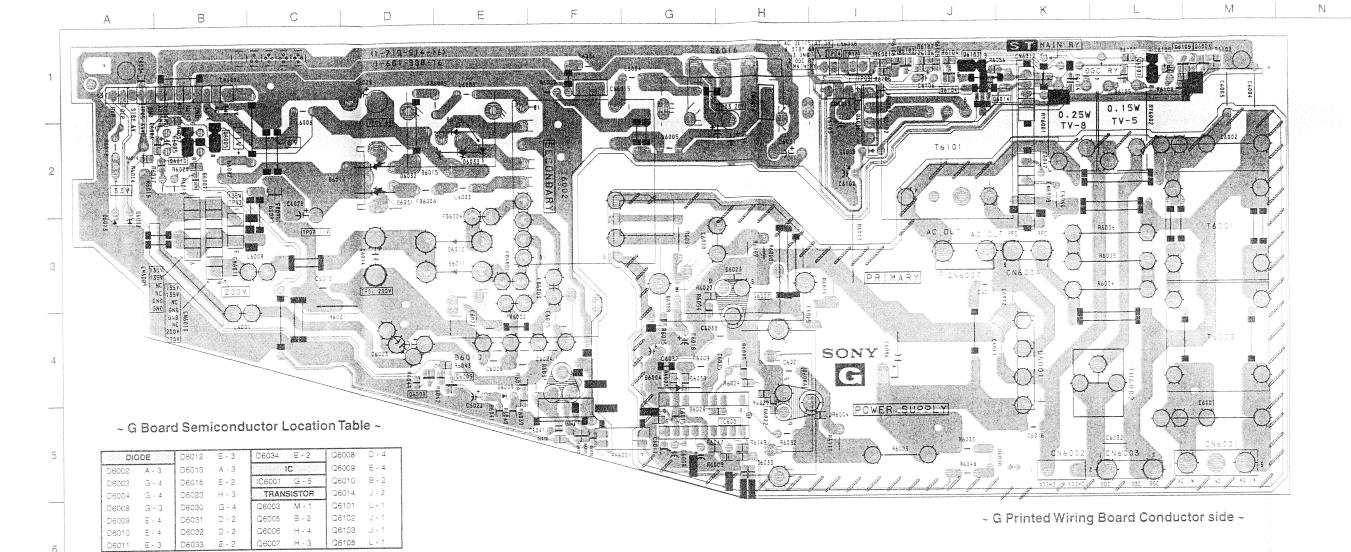


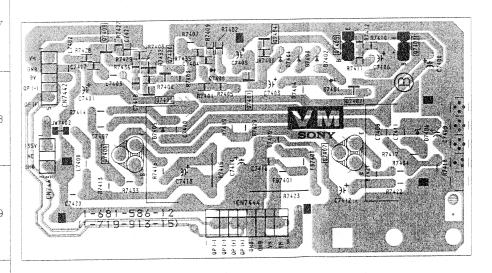
### ~ A Board Location Table (A Side) ~

30	21006	M - 10	. D3003	M - 7	D3015	M - 4	D3026	M - 2	D5305	D - 6	D6200	J-6	IC5301	D - 4	1C6206	H - 3
M - 7	D2014	L-9	D3005	M - 7	D3017	M - 4	D3028	M - 2	D5306	C - 5	D7004	F-7	IC5302	B - 4	1C6207	H - 4
L - 5	D2015	K - 9	D3007	M - 7	D3018	N - 3	D3201	J - 2	D5307	D - 7	IC		IC5400	G - 4	TRANS	ISTOR
1-4	D2018	M - 2	D3008	M - 7	D3019	N - 3	D5103	D - 6	D5400	E - 4	IC5104	D-6	IC6201	G - 9	Q5202	E- 2
H - 2		M - 2	D3009	N - 7	D3021	M - 4	D5104	E - 5	D5404	F - 4	IC5200	B - 3	IC6202	1 - 6	Q5301	C - 5
		H - 9	D3011	M - 4	D3023	M - 4	D5200	D - 2	D5405	F-3	IC5201	C - 4	IC6203	J - 6	Q5306	E - 4
				M - 4	D3024	M - 4	D5201	E - 2	D5807	F-7	IC5300	E - 4	IC6205	D - 5	Q5404	F - 4
	M - 7 L - 5	M - 7 D2014 L - 5 D2015 I - 4 D2018 H - 2 D2019 M - 4 D2502	M-7 D2014 L-9 L-5 D2015 K-9 I-4 D2018 M-2 H-2 D2019 M-2 M-4 D2502 H-9	M-7         D2014         L-9         D3005           L-5         D2015         K-9         D3007           1-4         D2018         M-2         D3008           H-2         D2019         M-2         D3009           M-4         D2502         H-9         D3011	M-7         D2014         L-9         D3005         M-7           L-5         D2015         K-9         D3007         M-7           1-4         D2018         M-2         D3008         M-7           H-2         D2019         M-2         D3009         N-7           M-4         D2502         H-9         D3011         M-4	M-7         D2014         L-9         D3005         M-7         D3017           L-5         D2015         K-9         D3007         M-7         D3018           1-4         D2018         M-2         D3008         M-7         D3019           H-2         D2019         M-2         D3009         N-7         D3021           M-4         D2502         H-9         D3011         M-4         D3023	M-7         D2014         L-9         D3005         M-7         D3017         M-4           L-5         D2015         K-9         D3007         M-7         D3018         N-3           I-4         D2018         M-2         D3008         M-7         D3019         N-3           H-2         D2019         M-2         D3009         N-7         D3021         M-4           M-4         D2502         H-9         D3011         M-4         D3023         M-4	M-7         D2014         L-9         D3005         M-7         D3017         M-4         D3028           L-5         D2015         K-9         D3007         M-7         D3018         N-3         D3201           I-4         D2018         M-2         D3008         M-7         D3019         N-3         D5103           H-2         D2019         M-2         D3009         N-7         D3021         M-4         D5104           M-4         D2502         H-9         D3011         M-4         D3023         M-4         D5200	M-7         D2014         L-9         D3005         M-7         D3017         M-4         D3028         M-2           L-5         D2015         K-9         D3007         M-7         D3018         N-3         D3201         J-2           1-4         D2018         M-2         D3008         M-7         D3019         N-3         D5103         D-6           H-2         D2019         M-2         D3009         N-7         D3021         M-4         D5104         E-5           M-4         D2502         H-9         D3011         M-4         D3023         M-4         D5200         D-2	M-7 D2014 L-9 D3005 M-7 D3017 M-4 D3028 M-2 D5306 L-5 D2015 K-9 D3007 M-7 D3018 N-3 D3201 J-2 D5307 L-4 D2018 M-2 D3008 M-7 D3019 N-3 D5103 D-6 D5400 H-2 D2019 M-2 D3009 N-7 D3021 M-4 D5104 E-5 D5404 M-4 D2502 H-9 D3011 M-4 D3023 M-4 D5200 D-2 D5405	M-7 D2014 L-9 D3005 M-7 D3017 M-4 D3028 M-2 D5306 C-5 L-5 D2015 K-9 D3007 M-7 D3018 N-3 D3201 J-2 D5307 D-7 l-4 D2018 M-2 D3008 M-7 D3019 N-3 D5103 D-6 D5400 E-4 H-2 D2019 M-2 D3009 N-7 D3021 M-4 D5104 E-5 D5404 F-4 M-4 D2502 H-9 D3011 M-4 D3023 M-4 D5200 D-2 D5405 F-3	M-7 D2014 L-9 D3005 M-7 D3017 M-4 D3028 M-2 D5306 C-5 D7004 L-5 D2015 K-9 D3007 M-7 D3018 N-3 D3201 J-2 D5307 D-7 I-4 D2018 M-2 D3008 M-7 D3019 N-3 D5103 D-6 D5400 E-4 IC5104 H-2 D2019 M-2 D3009 N-7 D3021 M-4 D5104 E-5 D5404 F-4 IC5200 M-4 D2502 H-9 D3011 M-4 D3023 M-4 D5200 D-2 D5405 F-3 IC5201	M-7 D2014 L-9 D3005 M-7 D3017 M-4 D3028 M-2 D5306 C-5 D7004 F-7 L-5 D2015 K-9 D3007 M-7 D3018 N-3 D3201 J-2 D5307 D-7 IC	M-7 D2014 L-9 D3005 M-7 D3017 M-4 D3028 M-2 D5306 C-5 D7004 F-7 IC5302 L-5 D2015 K-9 D3007 M-7 D3018 N-3 D3201 J-2 D5307 D-7 IC IC5400 IC5400 IC5400 H-2 D2018 M-2 D3008 M-7 D3019 N-3 D5103 D-6 D5400 E-4 IC5104 D-6 IC6201 M-2 D3009 N-7 D3021 M-4 D5104 E-5 D5404 F-4 IC5200 B-3 IC6200 M-4 D2502 H-9 D3011 M-4 D3023 M-4 D5200 D-2 D5405 F-3 IC5201 C-4 IC6203 IC6203 IC6205 IC62	M-7 D2014 L-9 D3005 M-7 D3017 M-4 D3028 M-2 D5306 C-5 D7004 F-7 IC5302 B-4 L-5 D2015 K-9 D3007 M-7 D3018 N-3 D3201 J-2 D5307 D-7 IC IC IC5400 G-4 I-4 D2018 M-2 D3008 M-7 D3019 N-3 D5103 D-6 D5400 E-4 IC5104 D-6 IC6201 G-9 H-2 D2019 M-2 D3009 N-7 D3021 M-4 D5104 E-5 D5404 F-4 IC5200 B-3 IC6202 I-6 M-4 D2502 H-9 D3011 M-4 D3023 M-4 D5200 D-2 D5405 F-3 IC5201 C-4 IC6203 J-6	M-7 D2014 L-9 D3005 M-7 D3017 M-4 D3028 M-2 D5306 C-5 D7004 F-7 IC5302 B-4 IC6207 L-5 D2015 K-9 D3007 M-7 D3018 N-3 D3201 J-2 D5307 D-7 IC5400 G-4 TRANS 1-4 D2018 M-2 D3008 M-7 D3019 N-3 D5103 D-6 D5400 E-4 IC5104 D-6 IC6201 G-9 Q5202 H-2 D2019 M-2 D3009 N-7 D3021 M-4 D5104 E-5 D5404 F-4 IC5200 B-3 IC6202 I-6 Q5301 M-4 D2502 H-9 D3011 M-4 D3023 M-4 D5200 D-2 D5405 F-3 IC5201 C-4 IC6203 J-6 Q5301

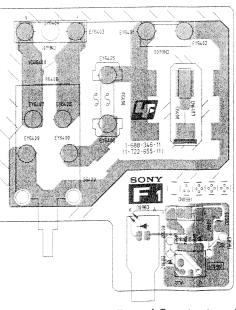
### ~ A Board Location Table (B Side) ~

DIC	DDE	D2503	G - 9	D3024	B - 3	D5309	J - 3	IC5103	L - 3	TRAN	SISTOR	Q3201	C - 2	Q5300	M - 4	Q7003	H - 6
D0101	B - 7	D3001	B - 7	D3026	8 - 2	D5400	K - 4	IC5104	K - 5	Q1000	C - 6	Q3202	C - 3	Q5301	L - 5	Q7009	1 - 7
D0104	C - 5	D3003	B - 7	D3028	C - 2	D5401	J - 4	1C5200	M - 3	Q1001	D - 6	Q3204	C - 3	Q5302	K - 7	Q7011	J - 6
D0110	G - 4	D3005	B - 7	D3201	F - 2	D5404	J - 3	IC5201	L - 4	Q1004	D - 11	Q3300	F - 3	Q5303	M - 4	Q7012	J - 5
D0111	G - 2	D3007	3 - 6	D5103	L-6	D5405	1 - 3	IC5300	J - 3	Q1005	B - 2	Q3301	F·3	Q5304	M - 5	Q7013	J-6
D0112	C - 5	D3008	B - 6	D5104	J - 5	D5809	K - 8	IC5301	K - 4	Q1006	B - 3	Q3302	F - 3	Q5305	K - 3	Q7014	J-6
D0113	C - 5	D3009	B - 6	D5200	K - 2	D5811	L-8	IC5302	M - 4	Q2000	C - 9	Q3500	F - 3	Q5306	K - 4	Q7015	1-5
D1006	B - 10	D3011	C - 4	D5202	L-4	D5812	L - 8	IC5400	1 - 3	Q2002	D - 9	Q3501	F - 3	Q5400	J - 4	Q7016	1-6
D2014	C - 9	D3013	C - 4	D5300	L - 5	D6200	E - 7	IC6200	1 - 9	Q2003	D - 9	Q5101	M - 5	Q5401	J - 4	Q7017	1 - 6
D2015	D - 9	D3015	C - 4	D5303	N - 4	1,655,41	C	IC6201	1 - 8	Q2004	E - 7	Q5200	M - 4	Q5402	J - 5	Q7018	1 - 5
D2016	E - 8	D3017	B - 4	D5304	M - 4	IC2000	C-8	IC6202	F - 6	Q2005	E - 7	Q5201	N - 4	Q5403	J - 4	Q7019	l - 6
D2018	B - 2	D3018	B - 3	D5305	L - 6	IC2001	D - 9	IC6203	E - 6	Q2501	G - 8	Q5202	K - 3	Q5404	J - 4		
D2019	B - 2	D3019	B - 3	D5306	L·5	IC2500	F - 8	IC6205	K - 5	Q2502	G - 9	Q5203	J - 2	Q5813	J - 8		
D2500	G - 9	D3021	C - 4	D5307	L - 7	IC3100	E - 5	IC6206	G - 3	Q2503	G - 9	Q5204	L - 4	Q5815	L - 8		
D250 <b>2</b>	G - 9	03023	8 - 3	D5308	M - 4	IC3200	E - 3	IC6207	G · 4	C3200	C - 3	Q5205	M - 3	Q5816	L - 3	j	

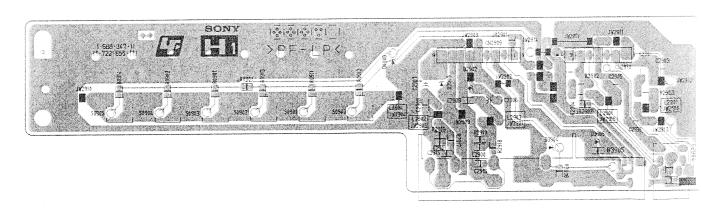




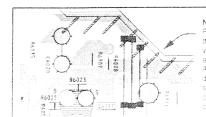
~ VM Printed Wiring Board Conductor side ~



~ F1 Printed Wiring Board Conductor side ~



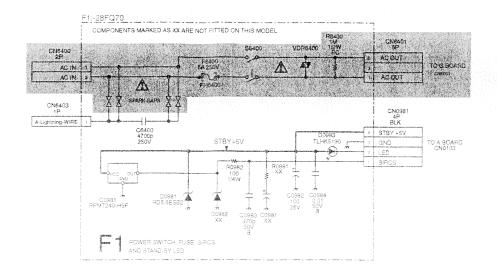
~ H1 Printed Wiring Board Conductor side ~



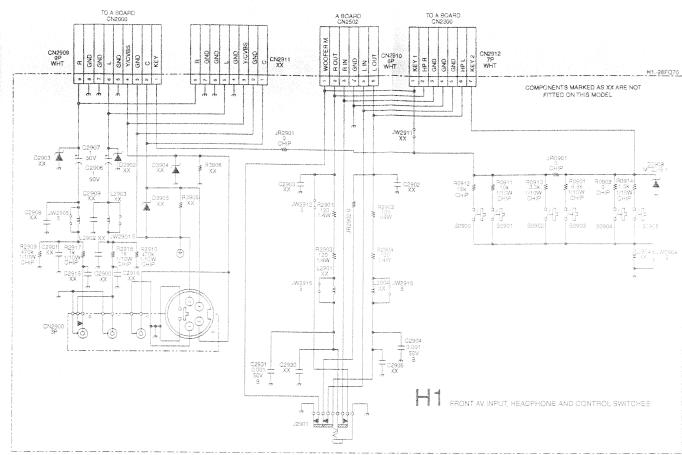
Note:
Portions of the circuit contained within the marked areas as shown have high voltages present. Use care to prevent

A B C D E F G H I J K L M N

~ F1 Board Schematic Diagram [ Power Switch, Fuse, SIRCS and Stand-By LED ] ~

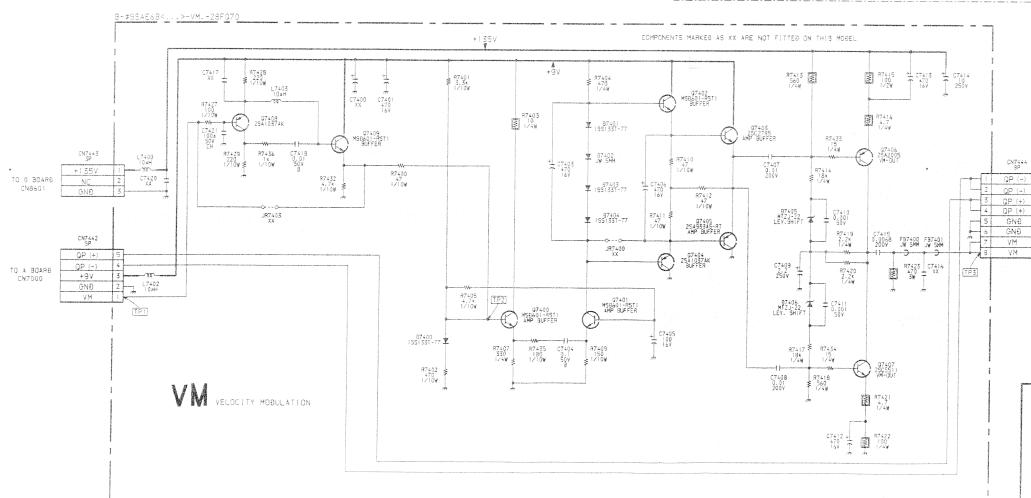


~ H1 Board Schematic Diagram [ Front AV Input, Headphone and Control Switches ] ~



~ VM Board Schematic Diagram [Velocity Modulation] ~

10

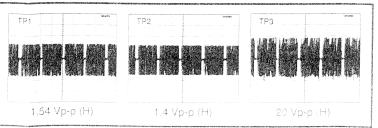


### ~ VM Board Voltage Table ~

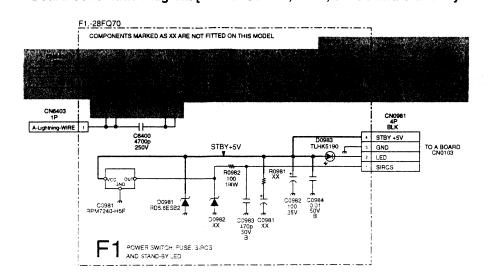
Ref	(e)(s)	(b)(g)	(c)(d
Q7400	5.0	5.7	8.7
Q7401	0.9	1.5	4.1
Q7402	5.5	6.1	8.9
Q7403	5.1	5.5	8.9
Q7404	4,7	4.1	0
Q7405	5.1	4.7	0
Q7406	134	133.8	68
Q7407	1.1	1.4	68
Q7408	6.3	5.6	2.5
Q7409	5.7	6.3	0.9

TO NECK ASSY

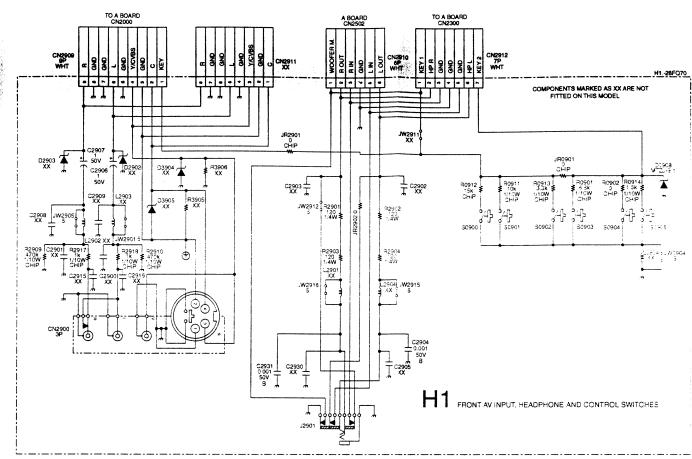
~ VM Board Waveforms ~





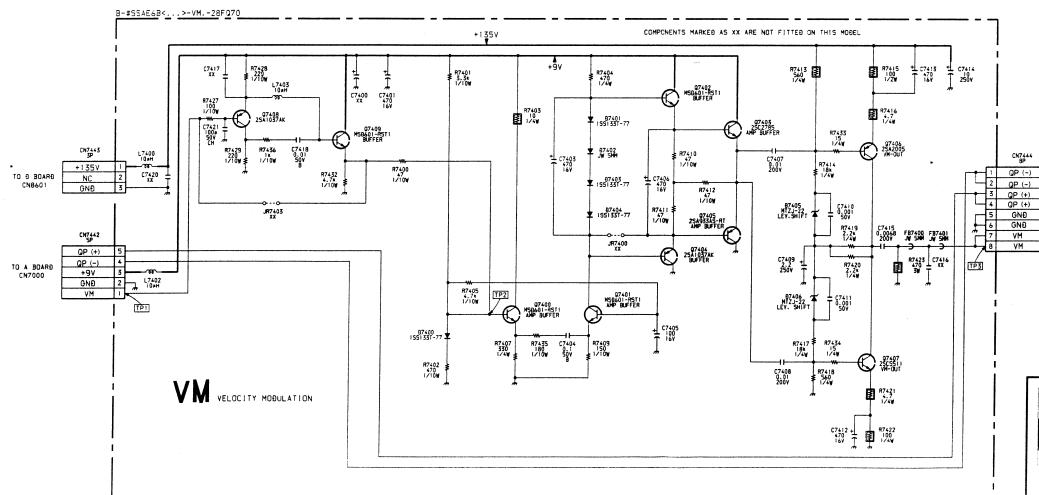


~ H1 Board Schematic Diagram [ Front AV Input, Headphone and Control Switches ] ~



~ VM Board Schematic Diagram [Velocity Modulation] ~

10

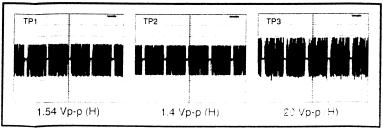


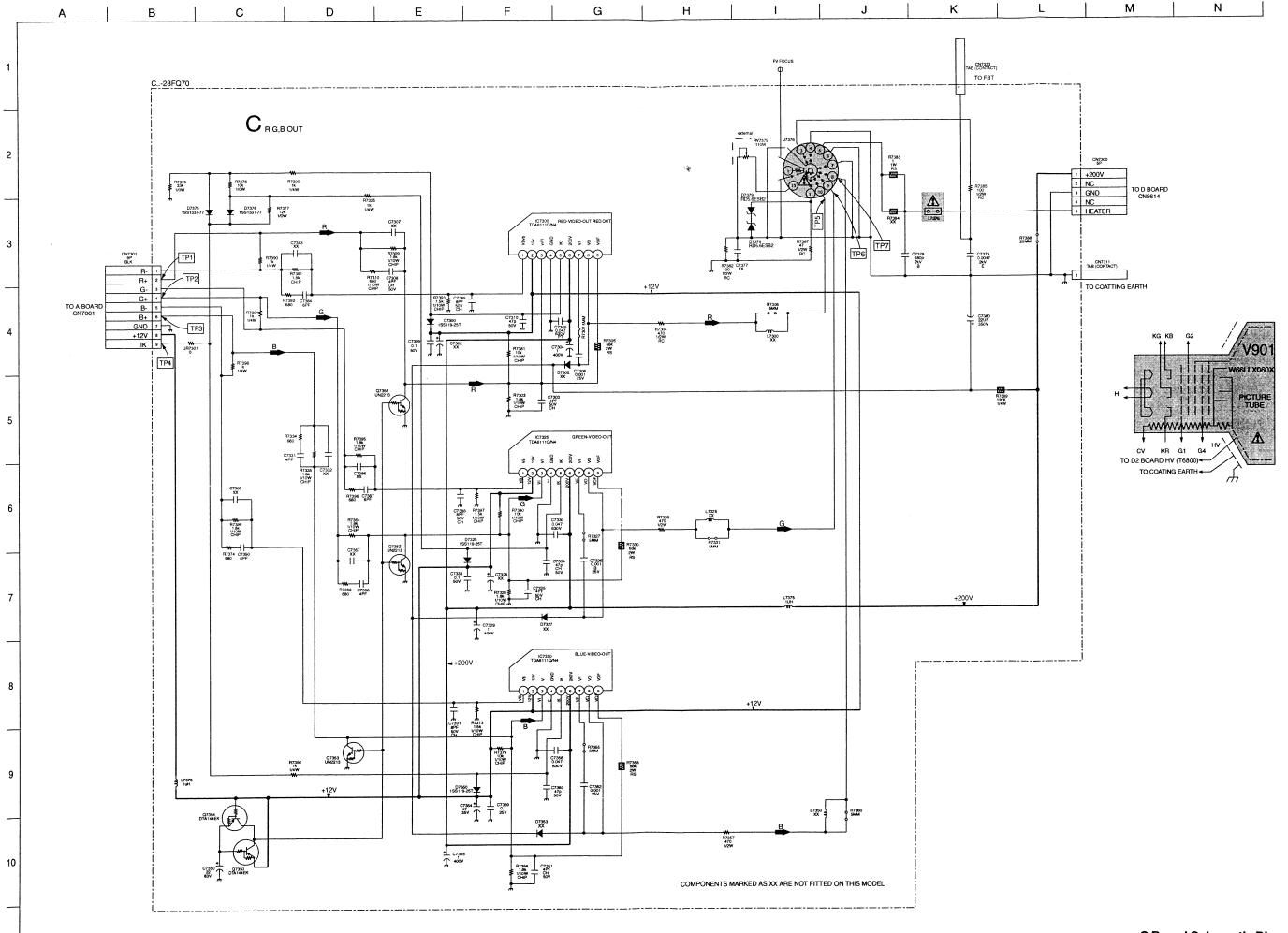
### ~ VM Board Voltage Table ~

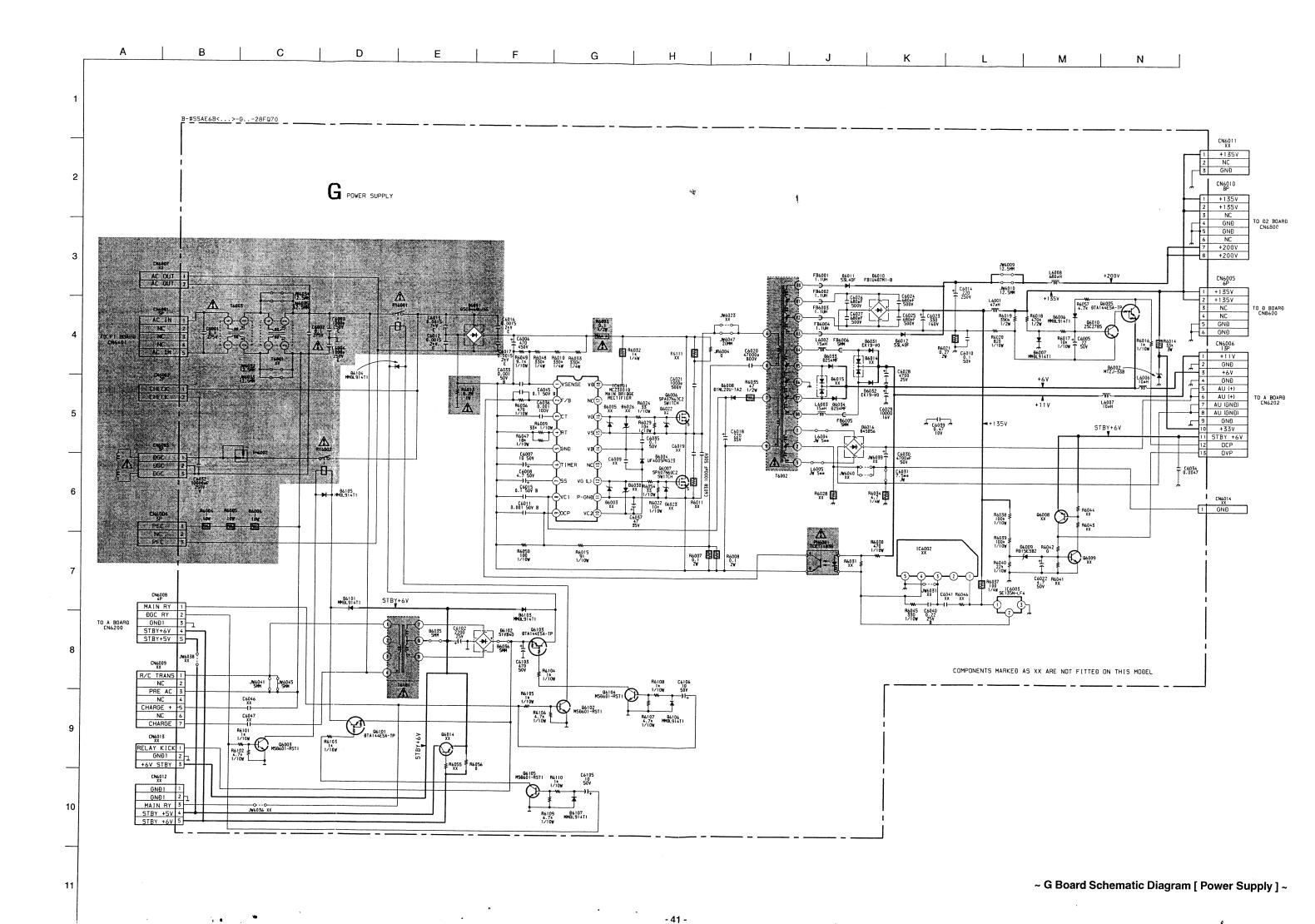
Ref	(e)(s)	(b)(g)	(c)(d)
Q7400	5.0	5.7	8.7
Q7401	0.9	1.5	4.1
Q7402	5.5	6.1	8.9
Q7403	5.1	5.5	8.9
Q7404	4.7	4.1	0
Q7405	5.1	4.7	0
Q7406	134	133.8	68
Q7407	1.1	1.4	68
Q7408	6.3	5.6	2.5
Q7409	5.7	6.3	0.9

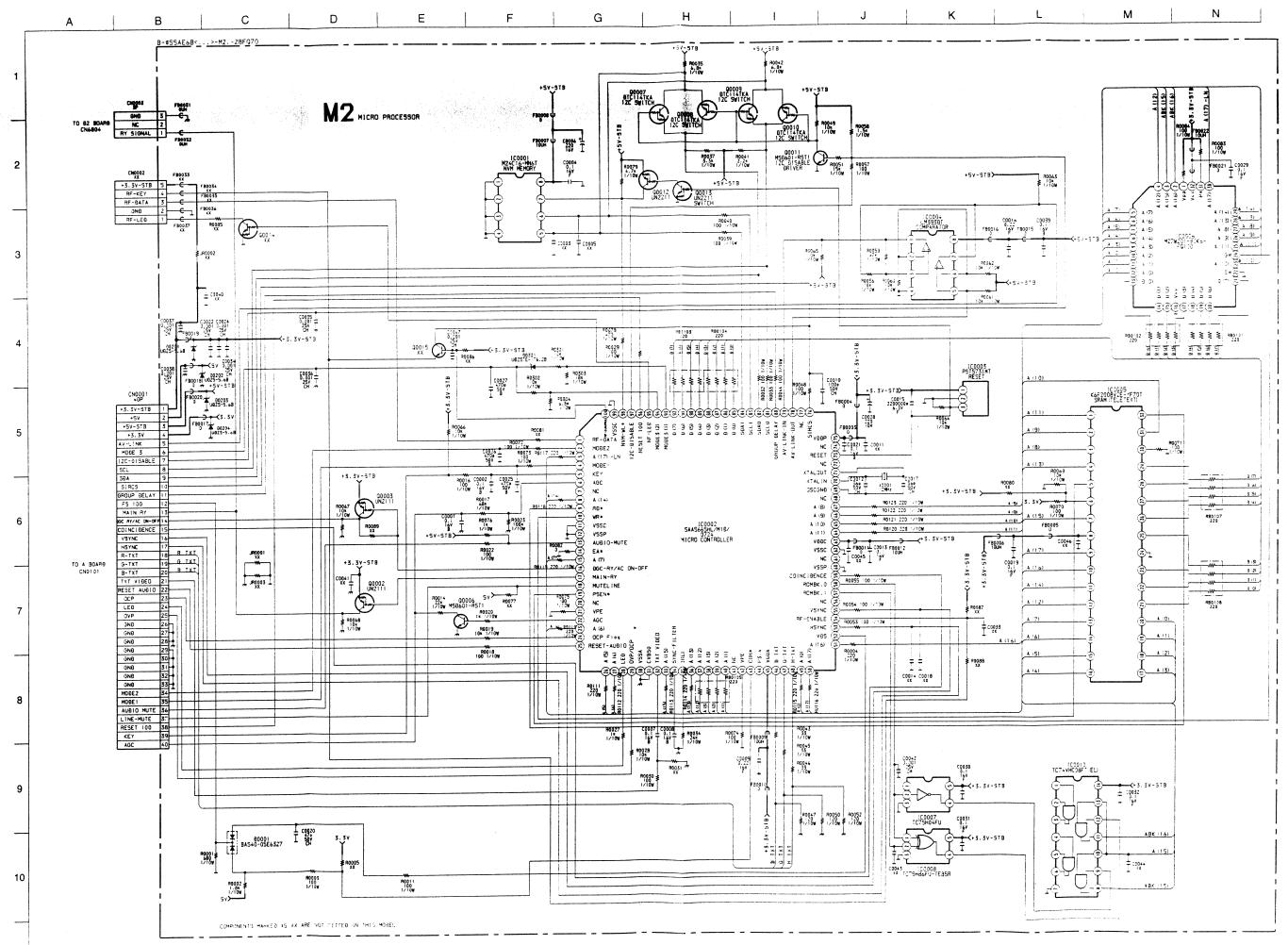
TO NECK ASSY

~ VM Board Waveforms ~

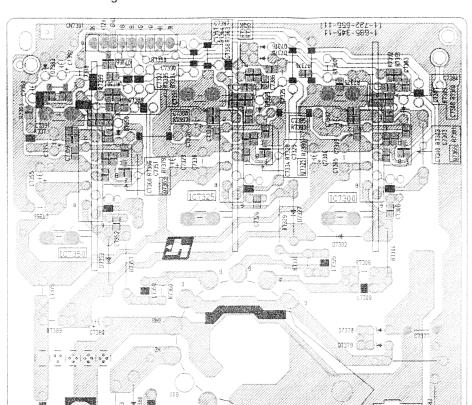




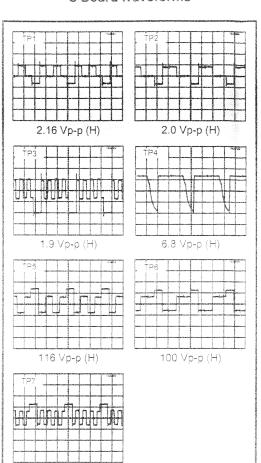




~ C Printed Wiring Board Conductor side ~

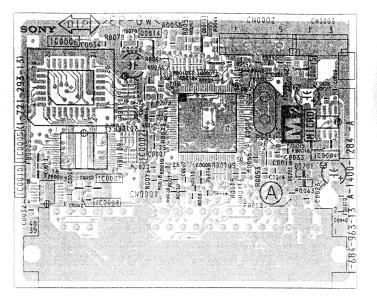


~ C Board Waveforms ~

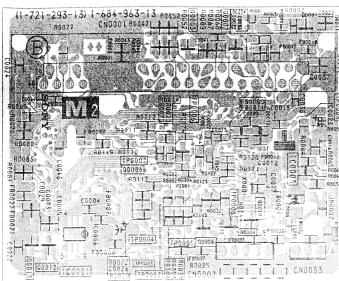


100 Vp-p (H)

~ M2 Printed Wiring Board Conductor side A ~



~ M2 Printed Wiring Board Conductor side B ~



~ D2 Printed Wiring Board Conductor side ~

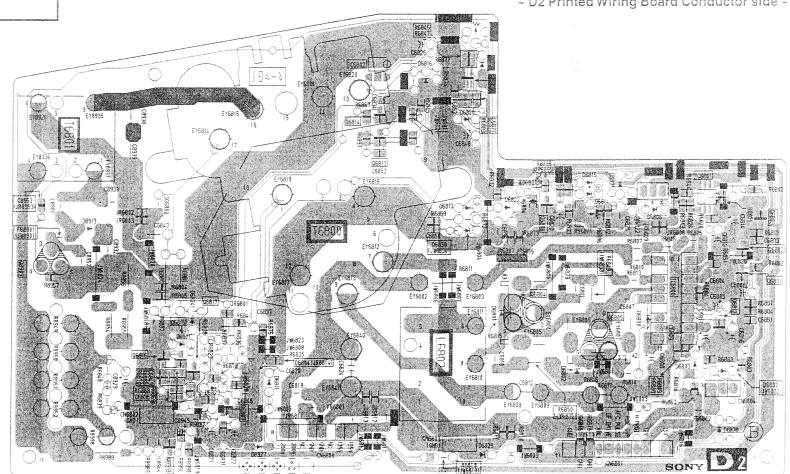
### ~ C Board Semiconductor Voltage Table ~

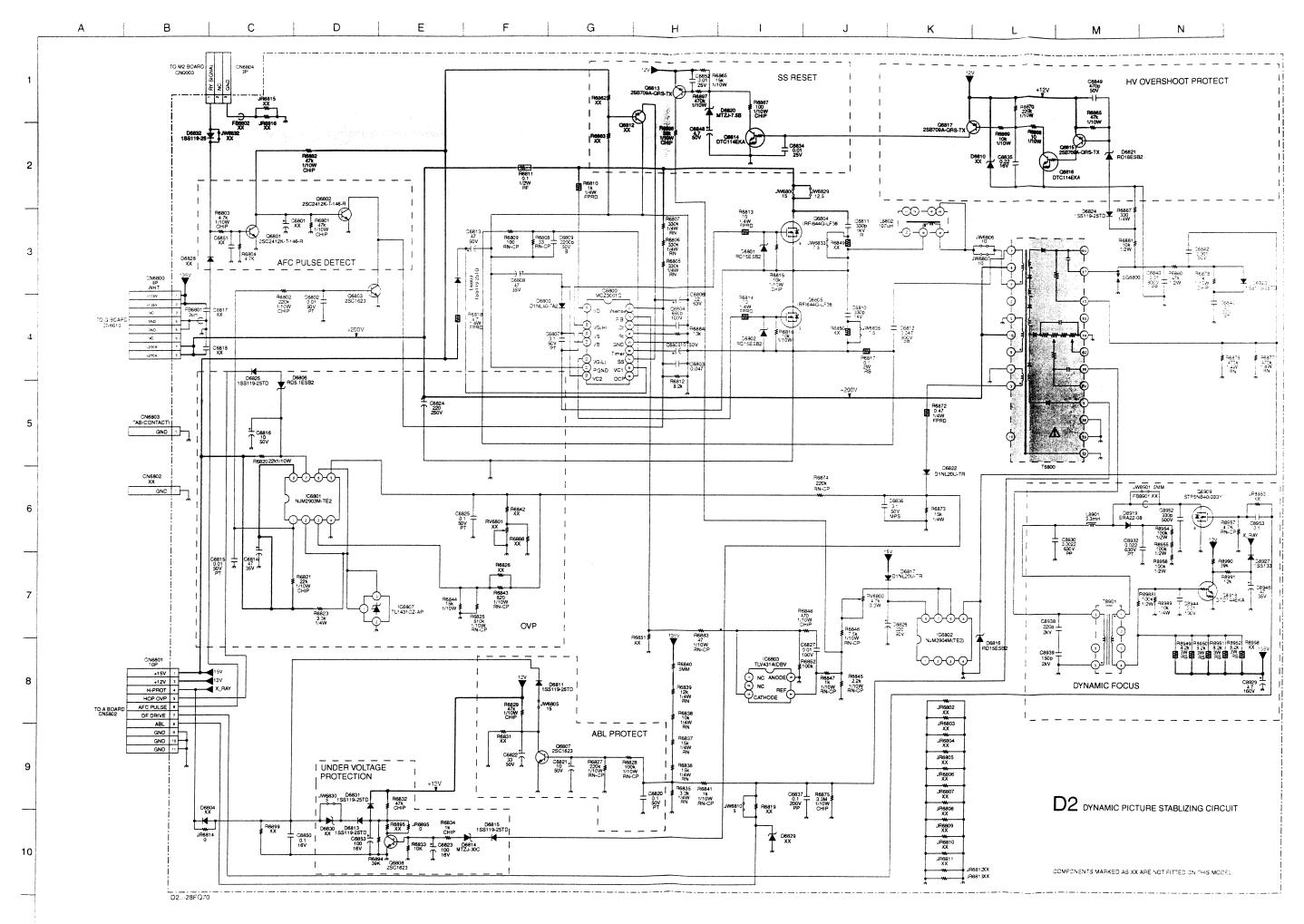
SONY

Ref	(e)	(b)	(c)
Q7350	12	11.98	0
Q7352	0	0	3.8
Q7353	0	0	3.8
Q7354	11.98	12	0
07355	0	0	3.8

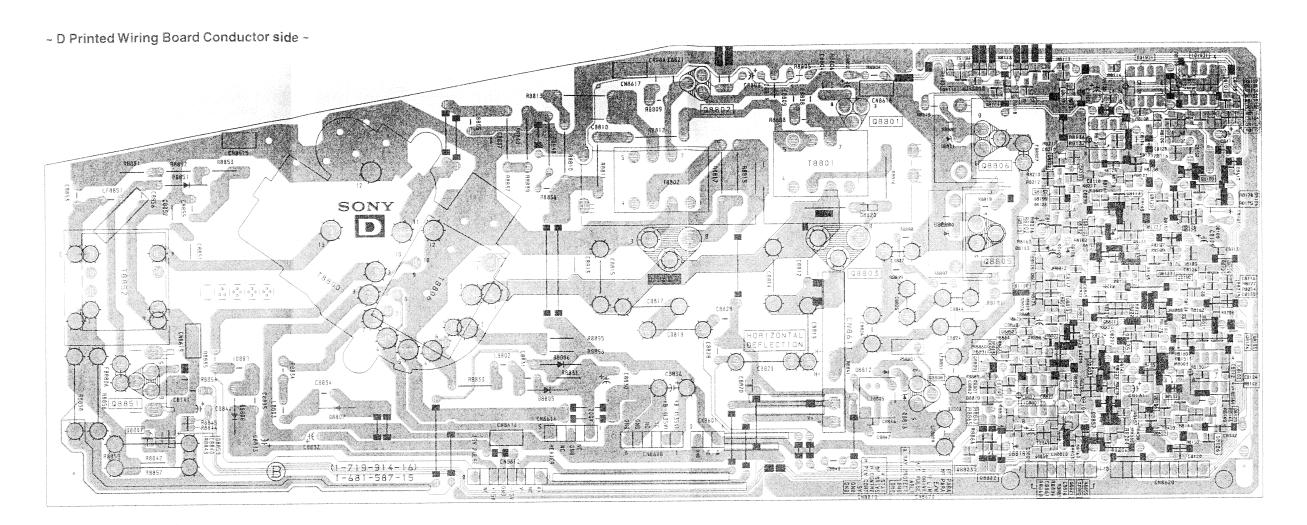
~ C Board IC Voltage Table ~

IC	Voltage	Table
Ref No	Pin No	Voltage (V)
	1	3.9
	3	3.8
	5	7.5
IC7300	6	200
	7	140
	8	153
	9	140
	1	3.9
	3	3.8
	5	7.7
IC7325	6	200
	7	140
	8	153
	9	140
	1	3.9
	3	3.8
	5	7.5
C7350	6	200
	7	139
	8	148
	9	138

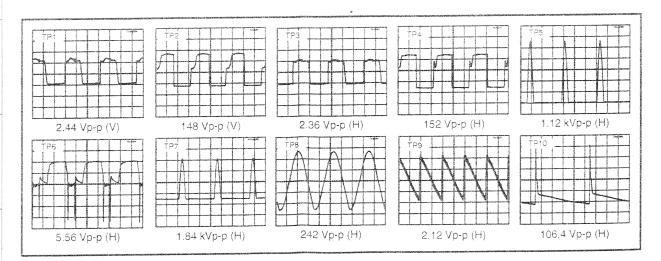




B C D E F G H



### ~ D Board Waveforms ~

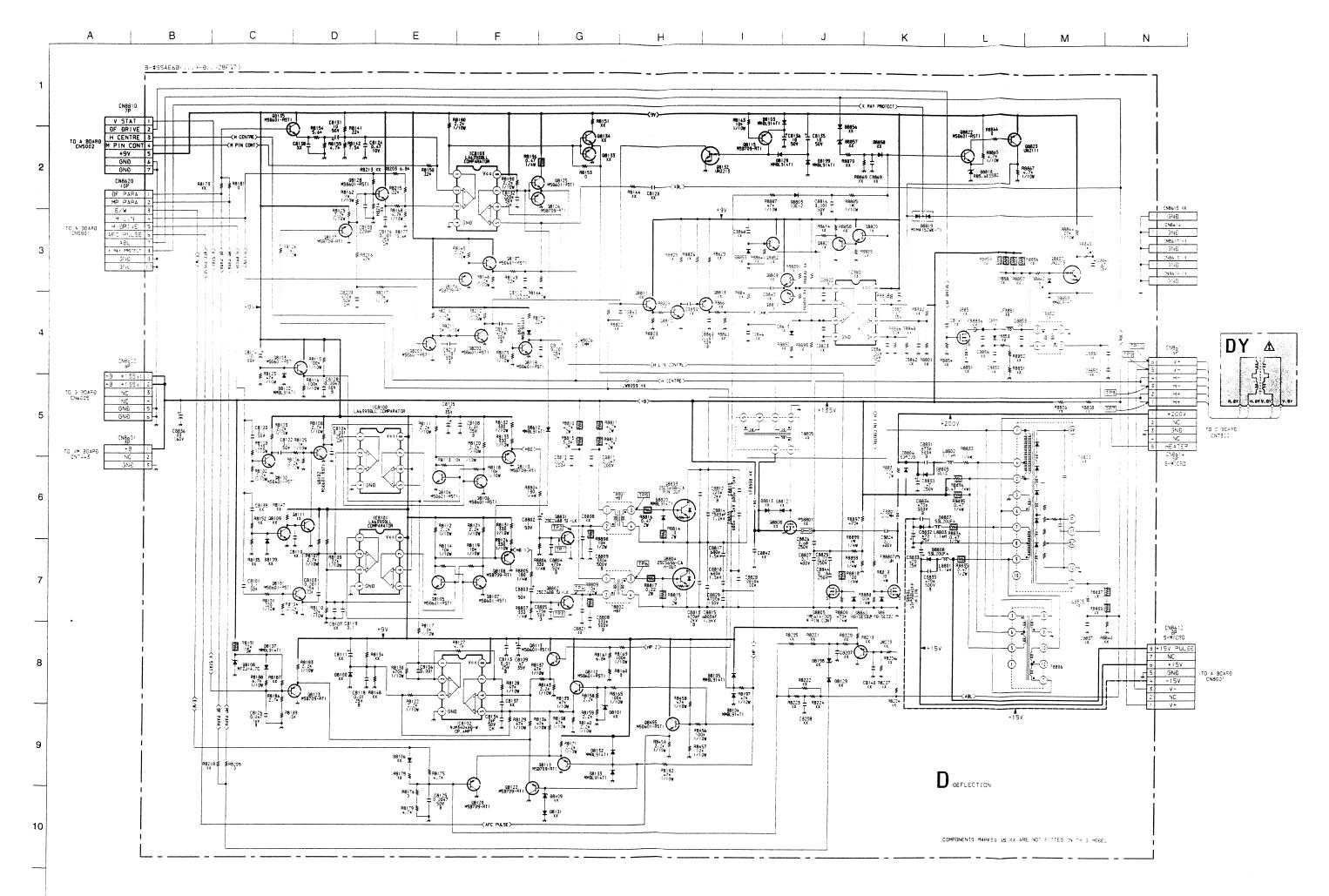


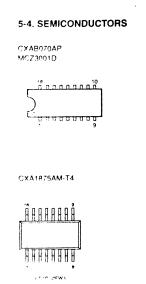
### ~ D Board IC Voltage Table ~

IC	Voltage	Table
Ref No	Pin No	Voltage (V)
	1	0.3
	2	4.3
IC8100	3	4.1
108 100	5 6	4.1
		3.0
	7	0.4
	1	0.3
	2	4.3
IC8101	3	4.4
100101	5	4.4
	. 6	3.0
	7	0.4
	1	4.1
	2	0.4
IC8102	3	0.4
100102	5	0.4
	6	0.4
	7	0.4
	1	2.5
	2	2.1
IC8103	3	1.7
106103	5	1.6
	6	1.0
	7	1.1

### ~ D Board Semiconductor Voltage Table ~

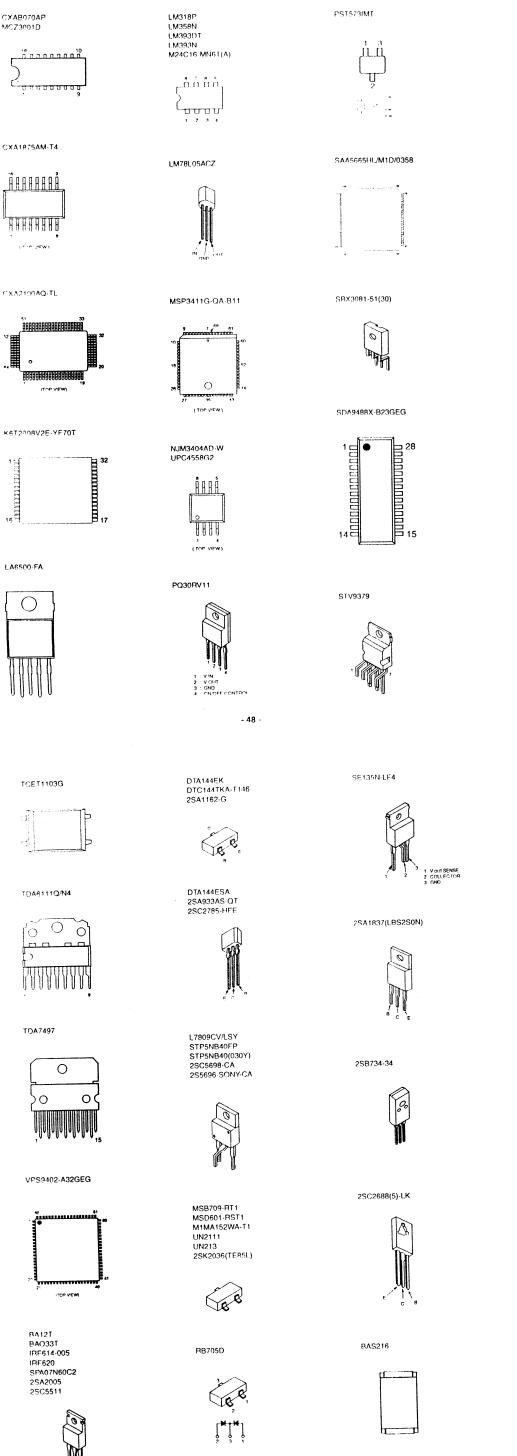
Ref	(e)(s)	(b)(g)	(c)(d)												
Q8100	0	0.6	3.6	Q8110	2.4	3.1	0	Q8128	3.4	1.5	8.9	Q8801	0	0.4	64.7
Q8101	0	0.6	4.3	Q8113	0.3	0.2	8.9	Q8132	0	0	3.4	Q8802	0	0.4	73.2
Q8102	0	0.3	4.3	Q8115	8.6	8.9	0	Q8135	2.6	3.2	8.9	Q8807	0	6.3	0
Q8103	4.0	0	8.9	Q8118	0	0	5.0	Q8136	2.5	1.8	0	Q8818	0	0	5.0
Q8104	0	0.4	3.1	Q8119	0.7	1.4	0	Q8137	1.8	2.5	8.9	Q8822	5.5	4.9	0
Q8105	0	0.4	3.2	Q8120	0.7	2.3	0	Q8201	0	0.6	3.9	Q8823	8.9	8.5	0
Q8106	0	0.3	4.3	Q8122	0.5	1.4	0	Q8202	0	0.8	3.4	Q8805	0	2.5	33
Q8107	0	0.3	4.2	Q8123	0.5	1.4	0	Q8203	1.4	0.9	0	Q8806	0	1.2	135
Q8108	2.4	3.2	0	Q8127	1.4	1.5	0	Q8455	1.1	1.7	8.9	Q8851	0	5.4	81.5

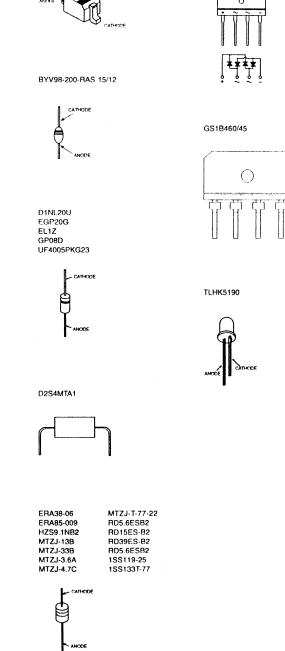




LA6500-FA

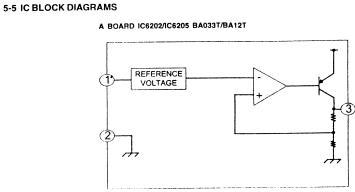
TDA7497

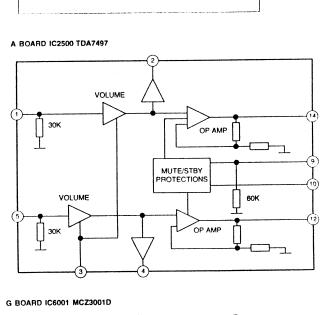


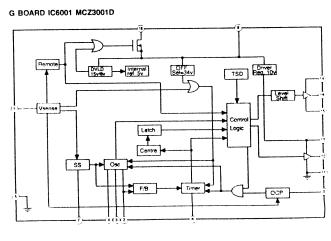


FBIU4D7MA-B RBV-406B S1VB40

BAS316-115 MMDL914T1 UDZSTE-176.2B







## SECTION 6 EXPLODED VIEWS

### NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service
- The construction parts of an assembled part are indicated with a collation number in the remarks column.

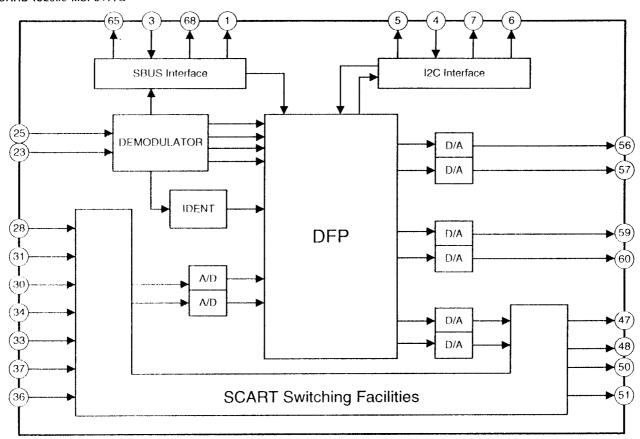
Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items. Note: Les composants indentifies par une trame et par une marque A sonte d'une importance critique pour la securite. Ne les remplacer que par des pieces du numero specifie.

Note: The components identified by shading and marked ∆ are critical for safety. Replace only with the part numbers specified in the parts list.

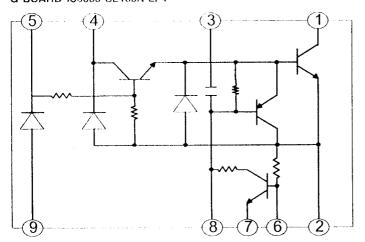
# 

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
1	*A-1302-135-A	H1 BOARD, COMPLE	TE	11	*A-1300-167-A	A BOARD, COMPLETE	(KV-28FQ70E)
2	*A-1302-134-A	F1 BOARD, COMPLE	TE		*A-1300-601-A	A BOARD, COMPLETE	(KV-28FQ70U)
3 ∆	1-571-433-21	SWITCH, PUSH (AC	POWER)	12 ▲	1-453-378-21	TRANSFORMER ASSY,	FLYBACK (NX-6020//Z214)
4	*4-202-531-01	AC CORD LOCK (SC	)	13	*A-1300-530-A	D2 BOARD, COMPLET	I .
5 Δ	1-823-853-11	CORD, POWER (KV-	28FQ70B/28FQ70E)	14	*4-087-469-01	BRACKET, D2	
Δ	1-776-860-11	POWER CORD, FILT	ER (UK) (KV-28FQ70U)	· 15	*A-1300-168-A	D BOARD, COMPLETE	
6	+4-206-106-61	BRACKET, MAIN		16	*4-093-898-01	BRACKET, H	
7	+A-1300-173-A	G BOARD, COMPLET	E	17	4-058-870-01	SCREW +BVTP 3x16	TYPE 2 IT-3
8	1-424-855-11	COIL, CHOKE 29MM	H	18	1-529-408-11	SPEAKER (4.2x24CM	)
9	8-598-535-20	FRONTEND BTF-EF4	11 (KV-28FQ70B)	19	*A-1603-084-A	WOOFER COMPLETE A	SSY 20-21
	8-598-533-10	FRONTEND BTF-EC4	11 (KV-28FQ70E)	20	1-529-417-11	SPEAKER (8CM)	
	8-598-529-10	FRONTEND BTF-EU6	511 (KV-28FQ70U)	21	7-685-663-71	SCREW +BVTP 4x16	TYPE 2 IT-3
10	*A-1404-964-A	M2 BOARD, COMPLE	CTE	22	*4-093-829-01	REAR COVER	
11	*A-1300-358-A	,		23	7-685-648-79	SCREW (4x16), W(+	) P TAPPING

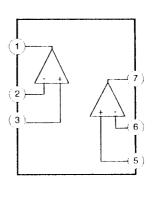
### A BOARD IC2000 MSP3411G



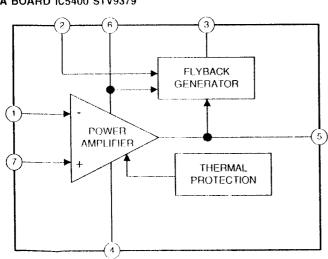
### G BOARD IC6003 SE135N-LF4



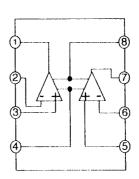
### A BOARD IC5301/IC5302 LA6393DLL



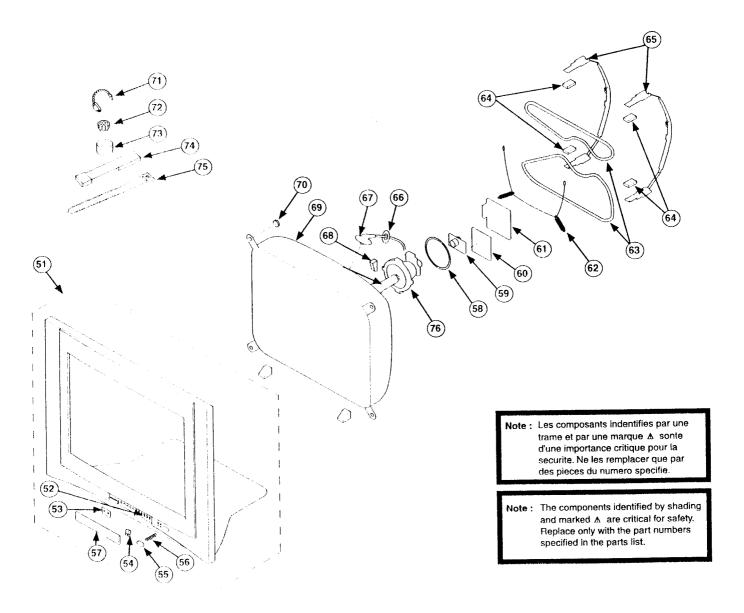
### A BOARD IC5400 STV9379



### A BOARD IC5300 LM358N



### 6-2. PICTURE TUBE



REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
51	*X-4041-353-1	BEZNET ASSY	52-57	64	4-203-390-11	CUSHION, DGC	
52	*4-087-533-01	MULTIBUTTON		65	*4-204-812-02	HOLDER, DGC	
53	4-087-530-01	GUIDE, LIGHT		66	*4-203-022-01	HOLDER, HV	The second secon
54	4-093-900-01	SPRING, DOOR		67 A	1-251-946-21	CAP ASSY, HIGH-VO	LTAGE
55	4-087-527-01	POWER BUTTON		68	3-704-495-01	SPACER, DY	and a second confidence of outside the confidence of
56	4-204-426-01	SPRING		69 A	8-735-099-05	PICTURE TUBE (N66	LLX060X)
57	4-093-827-01	DOOR		70	4-046-765-12	SCREW, TAPPING 74	CROWN WASHER
58	1-419-363-11	COIL, NA ROTATION		71	4-308-870-00	CLIP, LEAD WIRE	
59 ∧	8-453-011-11	NECK ASSY, (NA299-M)		72	1-452-094-00	MAGNET, ROTATABLE	DISK; 15MM
60 A	*A-1300-627-A	VM BOARD, COMPLETE		73	1-452-032-00	MAGNET, DISK; 101	IM.
61	*A-1302-133-A	C BOARD, COMPLETE		74	x-4387-214-1	PERMALLOY ASSY, (	CORRECTION
62	4-369-318-21	SPRING, TENSION		75	3-701-007-00	BAND, BINDING	
63 A	1-424-886-11	and the second of the second o		76 A	8-451-521-31	DEFLECTION YOKE	Y28RVC3-L2)

## SECTION 7 ELECTRICAL PARTS LIST

### PARTS LISTING TABLE OF CONTENTS

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A BOARD COMMON Parts List :	Parts common to all models in this manual	62
A BOARD VARIANT Parts List :	Parts that belong only to the model specified	
<u>Model</u>		
(KV-28FQ70B)		
(KV-28FQ70E):		
(KV-28FQ70U):	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
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Note: Refer to the designated variant parts list when seeking a part indicated by an asterisk (\*) Parts indicated (XX) on the Schematic Diagram are not used in this model and therefore do not appear in the Parts List.

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Note: The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

05106 1-106-964-11 ELECT 100F 100.00+ SOV

G

	specified in the p	arts ist.	1							L
REF.NO.	PART.NO	DESCRIPTION		REM	IARK	REF.NO.	PART.NO	DESCRIPT	ION	REMARK
* <b>A</b> -130	0-173-A GE	Board, Comp	olete				< CONNECT	YOR >		
		SCREW (M3X8)				CHECK TO				NY STATE OF
	4-382-854-01	SCREW (M3X8)	, P, SM (+)							
	< CAPACIT	*OR >					F 1-691-960-11			K. B. Sala
C6001 A	1-137-999-11	Pila (	0,10 <b>7</b>		275V		* 1-817-037-61			
26002 A	1-137-999-11	TIM 🕾 🌷			275V	CN6006	* 1-564-316-11	PLUG, COMM	ECTOR 13P	
26003 ∆	1-119-899-51	CERAMIC	1000PF	10.00%	2507	. 216008	* 1-564-507-11	PLUG, CONN	ECTOR 4P	
26004 ∆	1-119-899-51	CERANIC	1000PF			ZN6010	1-564-511-11	PLUG, COMN	ECTOR 3P	
36005	1-126-965-91	ELECT	225F	20.00%	50V					
							< 30008 >			
35006		ELECT (BLOCK)		20.00%		20001	6-500-067-01	31000 1017	M COT / AE	
	1-126-964-11		1007	20.30% 20.30%		36001	3-719-982-16			
26008	1-126-963-11		4.778 0.178	5.00%		26004	3-719-979-64			
36013 36011		CERAMIC CHIP					3-719-081-37			
-301-	1-102-904-11	CENAMIC CHIP	3.30102	19.305	204	26007	3-719-081-97			
16012 A	1-104-571-91	CONTC	0 0015HP	10 00%	2KV 1		3 .23 302 3	31030 1100		
	1-104-571-91	provide the second second	The second of the second	0.000 1 000		36008	8-719-063-70	DIODE DINL	.200	
	1-113-610-11	A		20%	250V	i	8-719-110-41			
26015		CERAMIC CHIP		10.00%	50V	06010	8-719-085-24	DIODE FBIO	4D7M1-B	
	1-104-571-91			10.00%	2KV	D6011	8-719-033-12	DIODE S3L4	OF	
	and the desired of the sections	r pagasagnum adalah di arang basa Pipina	ertektionskike och till ette		7550,75, 1 250	⊃6012	3-719-033-12	DIODE S3L4	OF	
6017 A	1-104-571-91	CERAMIC	0.0015UF	10.00%	2KV	i				
35018	1-126-949-11		2200F	20.00%		D6016	3-719-060-88	DIODE DASE	356	
06020	1-135-946-22	FILM	47000PF	38	800V	06031	8-719-080-59	DIODE EK19	)-V0	
	1-164-645-11		1000PF	10.00%	500V		8-719-080-59			
06022	1-126-963-11	ELECT	4.7UF	20.00%	50 <b>v</b>	D6033	8-719-022-97			
						D6034	8-719-022-97	DIODE D2\$4	MF	
	1-110-626-11		330UF	20.00%		i				
	1-164-625-11		680PF	10.00%			1-535-303-00			
26025	1-164-625-11		580PF	10.00%			1-216-295-91			
	1-164-625-11			10.00%		D6101	8-719-081-97 8-719-511-40			
06027	1-164-625-11	CERAMIC	680PF	10.30%	2004	D6102 D6103				
2029	1-128-548-11	DI DOM	4700CF	20.00%	2517	20102	3-113-001-31	DIODE RADI	131111	
06028 06029	1-126-939-11		10000UF	20.00%		76104	3-719-081-97	DIODE MADE	.914T1	
C6030	1-119-940-51		4700UF	20.30%			8-719-081-97			
C6031		LEAD, JUMPER		20.000		26106	8-719-081-97			
	1-113-927-11				250V	06107	8-719-081-97	DIODE HAD	.914T1	
C6033	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V		< FERRITE	BEAD >		
06034		CERAMIC CHIP		10.00%	50 <b>V</b>	:				
06035	1-136-165-00	FILM	0.10F	5.00%	50 <b>v</b>	FB6001	1-410-397-21	FERRITE	1.108	
06036	1-136-479-11	FILM	0.301UF	5.00%	100V	7B6002	1-410-397-21	FERRITE	1.108	
C6037	1-126-947-11	ELECT	470 <b>P</b>	20.00€	: 35V	FB6003			1.108	
						FB6004			1.1UE	
C6038	1-164-645-11			10.00%		FB6005	1-535-303-00	LEAD, JUM	PER (5.0MM)	
06039		CERAMIC CHIP		10.00%						
CE040		CERAMIC CHIP		10.00%		FB6006	1-535-303-00	LEAD, JUM	PER (5.3MM)	
06045	1-115-339-11			10.00%		1				
36102	1-126-943-11	ELECT	22000 <b>F</b>	20.309	25V	1	< IC >			
06103	1-126-971-11	ELECT	4700 <b>F</b>	20.003	50V	106001	3-759-670-30	EC MCZ300	10	
161.05	1-126-964-11		1305	20, 304		106003				
10110	1 175,354-11		1.100	38.303						

Note: The components identified by shading and marked \( \Delta\) are critical for safety. Replace only with the part numbers specified in the parts list.

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EF.NO.	PART.NO	DESCRIPTION			REMARK	REF.NO.	PART.NO	DESCRIPTION			REMARK
	< COIL >					R6032	1-249-417-11	CARBON	1 <b>X</b>	53	1/4₩
	( 0011 /					R6033	1-215-481-00	METAL	330 <b>K</b>	18	1/4W
	1-406-663-21	INDUCTOR	47UH			R6034	1-249-389-11	CARBON	4.7	5₹	1/4W
	1-412-527-11	INDUCTOR	150H			R6035	1-260-083-11	CARBON	47	5%	1/2W
6002	1-412-527-11	INDUCTOR	150H			R6036	1-216-817-11	METAL CHIP	470	5%	1/10W
.6003 .6004	1-535-303-00	LEAD, JUMPER	(5.0M)			Ì					
.6005	1-535-303-00	LEAD, JUMPER	(5.0MH)			R6037	1-249-405-11		100	5%	1/4W
C000.	1-333-303-00	DEAD, CONT.	,,			R6038	1-208-830-11	METAL CHIP			1/10W
16006	1-406-659-11	INDUCTOR	10UH			R6039	1-208-830-11	METAL CHIP			1/10W
.600 <b>7</b>	1-412-525-31	INDUCTOR	10UH			R6040	1-208-814-91	METAL CHIP		0.5€	1/10W
16008	1-406-670-11	INDUCTOR	680UB			R6042	1-216-295-91	SHORT CHIP	0		
.0000	-400-010 14	INDUCTOR									
	< 980T0C0	ל מיוים א				36045	1-216-639-11	METAL CHIP	330		1/10W
	( 2001000					R6047	1-216-681-11	METAL CHIP	13K		1/10W
77.COA1 A	8-749-016-21	TO TOTAL TIME TO THE TOTAL TO THE TOTAL TO			4	26048	1-215-481-00	METAL	330 <b>X</b>		1/4W
LEGULT TO	8-143-070-51	10 100131111				R6049	1-209-305-11	METAL CHIP			1/10W
	< TRANSIS	ב מיתים				86050	1-208-758-11	WETAL CHIP	100	0.53	1/10W
	( 1,00,01,										
2002	8-729-010-29	TRANSISTOR MS	n601-RST	1		26054	1-216-615-11	METAL CHIP	33	3.3%	1/10W
26003	8-729-029-56	TRANSISTOR Of		-		R6056	1-216-295-91	SHORT CHIP	)		
Q6005	5-550-146-01	TRANSISTOR SI		-38152		R6057	1-208-798-11	METAL CHIP			1/10W
26006 acana	6-550-146-01					R6101	1-216-821-11	METAL CHIP	1 <b>K</b>	58	1/10W
Q6007	8-729-119-78	TRANSISTOR 25				R6102	1-216-829-11	METAL CHIP	4.7K	5₹	1/10W
Q6010	0-173-113-19	IMMOISION 2		-							
06101	0 720 020-56	TRANSISTOR D	ra144RSA			R6103	1-216-821-11	METAL CHIP	18	5₹	1/10W
Q6101	8-729-010-29			1		R6104	1-216-821-11	METAL CHIP	1K	53	1/10W
Q6192				-		R6105	1-216-821-11	METAL CHIP	1 <b>K</b>	53	1/10%
26103	8-729-029-56			11		R6106	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
26104	9-729-010-29					R6107	1-216-829-11	METAL CHIP	4.7X	53	1/10W
26105	8-729-010-29	TRANSISTOR N	35001-101			}					
	. 2007.00	107 >				R6108	1-216-821-11	METAL CHIP	1K	5₹	1/10W
	< RESIST	:OR >				R6109	1-216-829-11	METAL CHIP	4.78	5%	1/10W
		SHORT CHIP	a			R6110	1-216-821-11	METAL CHIP	1 <b>K</b>	5%	1/10W
JR6004	1-216-533-31	SHORI CHIE	v								
	. 1-202-933-6I	motore.	1 K 1	for 2	1/21		< RELAY	>			
ROUVI, D	1-205-998-11	(SURFEE)		51	109					50.1.1	areas a comment of the comment
EGOUT A	1-205-998-11	COCOTTO	1.40	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 <b>0</b>		A 1-755-395-11			Teles	
RECORD A	1-205-998-11	CENTRATEO	- T		1 <b>0</b> W	RY6002 /	A 1-755-389-11	RELAY (AC P	OWER)		4 1 41 1 4 4
		METAL OXIDE			2W						
R6907	1-243-979-2	METAT ONTO	V.1	•			< TRANS	FORMER >			
						1					
- (0.00	1 147 070 2	MEMAI OVIDE	0.1	5%	2W						
R6008		1 METAL OXIDE			2W 1/10W	76002	Á 1-437-850-1	(PIT) CONVI	RTER T	RAISFO	RMER
R600 <b>9</b>	1-216-687-1	1 METAL CHIP	33 <b>K</b>	0.5%	1/10W	P6003	A 1-437-850-L A 1-424-896-1	TRANSFORME	, LINE	FILM	2
R6009 R6010	1-216-687-1 1-215-481-0	1 METAL CHIP 0 METAL	330K	0.5% 1%	1/10W 1/4W	P6003	A 1-424-896-1	TRANSFORME	, LINE	FILM	2
R6009 R6010 R6013 A	1-216-687-1 1-215-481-0 1-218-265-1	1 METAL CHIP 0 METAL 1 METAL	33K 330K 8.2M	0.5% 1% <b>5%</b>	1/10W 1/4W 1W	P6003	а 1-437-850-1 а 1-424-856-1 а 1-437-483-1	TRANSFORME	, LINE	FILM	2
R6009 R6010	1-216-687-1 1-215-481-0 1-218-265-1	1 METAL CHIP 0 METAL	33K 330K 8.2M	0.5% 1%	1/10W 1/4W	P6003	A 1-424-896-1 A 1-437-483-1	TRANSFORME	, LINE	FILM	2
R6019 R6019 R6013 24 R6014	1-216-687-1 1-215-481-0 <b>1-218-265-1</b> 1-215-926-0	1 METAL CRIP 0 METAL 1 METAL 0 METAL OXIDS	33K 330K 8.2M 33K	0.5% 1% <b>5%</b> 5%	1/10W 1/4W 1W	T6003	A 1-424-896-1 A 1-437-483-1 < There	I TRANSFORMEI I TRANSFORMEI IISTOR >	t, Line I, Stan	DBY	
R6019 R6010 R6013 24 R6014	1-216-687-1 1-215-481-0 <b>1-218-265-1</b> 1-215-926-0 1-208-757-1	1 METAL CHIP 0 METAL 1 METAL 0 METAL OXIDE 1 METAL CHIP	33K 330K 8.2M 33K	0.5% 1% <b>5%</b> 5%	1/10W 1/4W 1M 3W	T6003	A 1-424-896-1 A 1-437-483-1 < There	I TRANSFORMEI I TRANSFORMEI IISTOR >	t, Line I, Stan	DBY	2
R6009 R6010 R6013 2 A R6014 R6015 R6016	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1	1 METAL CHIP 0 METAL 1 METAL 0 METAL OXIDS 1 METAL CHIP 1 METAL CHIP	33K 330K 8.2M 33K 91 1K	0.5% 1% 5% 5% 0.5% 5%	1/10W 1/4W 1M 3W 1/10W 1/10W	T6003 T6101 TH6002	A 1-424-895-1 A 1-437-483-1 < THERM A 1-804-650-1	I TRANSFORMEN I TRANSFORMEN ISTOR > I THERMISTOR	, LINE , STAN	INR DBA	
R6019 R6010 R6013 2 4 R6014 R6015 R6016 R6017	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-216-833-1	1 METAL CHIP 0 METAL 1 METAL 0 METAL OXIDS 1 METAL CHIP 1 METAL CHIP 1 METAL CHIP 1 METAL CHIP	33K 330K 8.2M 33K 91 1K 10K	0.5% 1% 5% 5% 0.5% 5%	1/10W 1/4W 1W 3W 1/10W 1/10W 1/10W	T6003 T6101 TH6002	A 1-424-896-1 A 1-437-483-1 < There	I TRANSFORMEN I TRANSFORMEN ISTOR > I THERMISTOR	, LINE , STAN	INR DBA	
R6019 R6013 24 R6014 R6015 R6016 R6017 R6018	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-216-833-1 1-260-131-1	1 METAL CHIP 0 METAL 1 METAL 0 METAL OXIDE 1 METAL CHIP 1 METAL CHIP 1 METAL CHIP 1 METAL CHIP 1 CARBON	33K 330K 8.2M 33K 91 1K 10K 470K	0.5% 1% 5% 5% 0.5% 5% 5%	1/10W 1/4W 1W 3W 1/10W 1/10W 1/10W 1/2W	T6003 T6101 TH6002	A 1-424-895-1 A 1-437-483-1 < THERM A 1-804-650-1	I TRANSFORMEN I TRANSFORMEN ISTOR > I THERMISTOR	, LINE , STAN	INR DBA	
R6009 R6010 R6013 2 4 R6014 R6015 R6016 R6017	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-216-833-1	1 METAL CHIP 0 METAL 1 METAL 0 METAL OXIDE 1 METAL CHIP 1 METAL CHIP 1 METAL CHIP 1 METAL CHIP 1 CARBON	33K 330K 8.2M 33K 91 1K 10K	0.5% 1% 5% 5% 0.5% 5% 5%	1/10W 1/4W 1W 3W 1/10W 1/10W 1/10W	T6003 T6101 TH6002	A 1-424-895-1 A 1-437-483-1 < THERM A 1-804-650-1 300-168-A D	I TRANSFORMEN I TRANSFORMEN ISTOR > I THERMISTOR	t, LINE , STAN , POSIT	LIAR LIAR LIAR	
R6019 R6013 A R6013 A R6014 R6015 R6016 R6017 R6018 R6019	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-216-833-1 1-260-131-1 1-260-130-6	METAL CHIP METAL METAL METAL METAL METAL CHIP METAL CHI	33K 330K 8:2M 33K 91 1K 10K 470K 390K	0.5% 1% 5% 0.5% 5% 5% 5%	1/10W 1/4W 1M 1M 1/10W 1/10W 1/10W 1/10W 1/2W 1/2W	T6003 T6101 TH6002	A 1-424-895-1 A 1-437-483-1 < THERM A 1-804-650-1 300-168-A D	TRANSFORMER TRANSFORMER  ISTOR >  THERMISTOR  Board, Cor	t, LINE , STAN , POSIT	LIAR LIAR LIAR	
R6009 R6010 R6013 A R6013 A R6015 R6016 R6017 R6018 R6019	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-260-131-1 1-260-131-1 1-260-130-6	METAL CHIP METAL METAL METAL METAL METAL CHIP METAL CHIP METAL CHIP CARBON METAL CHIP CARBON METAL CHIP METAL CHIP METAL CHIP METAL CHIP	33K 330K 8:2M 33K 91 1K 10K 470K 390K	0.5% 1% 5% 0.5% 5% 5% 5%	1/10W 1/4W 1M 1M 1/10W 1/10W 1/10W 1/10W 1/2W 1/2W 1/10W	T6003 T6101 TH6002	A 1-424-896-1 A 1-437-483-1 < THERM A 1-804-650-1 300-168-A D 4-382-954-0	TRANSFORMER TRANSFORMER  ISTOR >  THERMISTOR  Board, Cor	t, LINE , STAN , POSIT	LIAR LIAR LIAR	
R6019 R6013 A R6013 A R6014 R6015 R6016 R6017 R6018 R6019	1-216-687-1 1-215-481-0 6 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-26-131-1 1-260-131-1 1-260-130-6 1-216-920-1 1-216-362-1	METAL CHIP METAL METAL METAL OXIDS  METAL CHIP METAL CHIP CARBON CARBON METAL CHIP CARBON METAL CHIP METAL CHIP METAL CHIP METAL CHIP METAL CHIP	33K 330K 8:2M 33K 91 1K 10K 470K 390K 820 5.0.27	0.5% 1% 5% 0.5% 5% 5% 5% 5%	1/10W 1/4W 1W 1W 1/10W 1/10W 1/10W 1/2W 1/2W 1/10W 2W	T6003 T6101 TH6002	A 1-424-896-1 A 1-437-483-1 < THERM A 1-804-650-1 300-168-A D 4-382-954-0	TRANSFORMER TRANSFORMER  IISTOR >  THERMISTOR  Board, Con  SCREW (M3X)	t, LINE , STAN , POSIT	LIAR LIAR LIAR	
R6019 R6010 R6013 4 R6014 8 R6015 R6015 R6016 R6017 R6018 R6019 R6020 R6021 R6022	1-216-687-1 1-215-481-0 6 1-218-265-1 1-215-926-0 1-209-757-1 1-216-821-1 1-260-131-1 1-260-130-6 1-216-820-1 1-216-820-1 1-216-833-1	METAL CHIP METAL METAL METAL OXIDE METAL CXIDE METAL CHIP CARBON CARBON METAL CHIP CARBON METAL CHIP METAL CHIP METAL CHIP METAL CHIP METAL CHIP METAL CHIP	33K 330K 8:2M 33K 91 1K 10K 470K 390K 820 E 0.27 10K	0.5% 1% 5% 0.5% 5% 5% 5% 5% 5% 5% 5%	1/10W 1/4H 1W 1W 1/10W 1/10W 1/10W 1/2W 1/2W 1/10W 2W 1/10W	T6003 T6101 TH6002	A 1-424-896-1 A 1-437-483-1 < THERM A 1-804-650-1 300-168-A D 4-382-954-0	TRANSFORMER TRANSFORMER ISTOR >  THERMISTOR DEGRATA, COR STREE (MSX CITOR >	t, LINE , STAN , POSIT	PILATE DESCRIPTION OF THE PILATE DESCRIPTION	
R6019 R6013 A R6014 R6015 R6016 R6017 R6019 R6019 R6020 R6021 R6022 R6024	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-216-833-1 1-260-131-1 1-260-130-6 1-216-820-1 1-216-362-1 1-216-833-1 1-216-615-	METAL CHIP METAL METAL METAL METAL CHIP METAL CHIP CARBON CARBON METAL CHIP CARBON METAL CHIP	33K 230K 8.2M 33K 91 1K 10K 470K 390K 820 0.27 10K 33	0.5% 1% 5% 5% 0.5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5%	1/10W 1/4W 1W 1W 1/10W 1/10W 1/10W 1/2W 1/2W 1/10W 2W 1/10W 1/10W	T6003 T6101 TH6002	A 1-424-895-1 A 1-437-483-1 < THERM A 1-804-650-1 300-168-A D 4-382-954-0 < CAPA	I TRANSFORMER I TRANSFORMER IISTOR > 1 THERMISTOR II SCREW (M3X CITOR > 20 FILM	POSITION POS	PILATE DEV	
R6019 R6010 R6013 24 R6014 R6015 R6016 R6017 R6018 R6019 R6020 R6021 R6022	1-216-687-1 1-215-481-0 1-218-265-1 1-215-926-0 1-208-757-1 1-216-821-1 1-216-833-1 1-260-131-1 1-260-130-6 1-216-820-1 1-216-362-1 1-216-833-1 1-216-615-	METAL CHIP METAL METAL METAL OXIDE METAL CXIDE METAL CHIP CARBON CARBON METAL CHIP CARBON METAL CHIP METAL CHIP METAL CHIP METAL CHIP METAL CHIP METAL CHIP	33K 230K 8.2M 33K 91 1K 10K 470K 390K 820 0.27 10K 33	0.5% 1% 5% 0.5% 5% 5% 5% 5% 5% 5% 5%	1/10W 1/4H 1W 1W 1/10W 1/10W 1/10W 1/2W 1/2W 1/10W 2W 1/10W	T6003 T6101 TH6002	A 1-424-895-1 A 1-437-483-1 < THERM A 1-804-650-1 300-168-A D 4-382-954-0 < CAPA 1-136-165-	TRANSFORMER TRANSFORMER ISTOR >  THERMISTOR BOARD, COP ISCREW (M3X CITOR >  OF FILM OF FILM	POSITION POSITION POSITION POSITION POSITION POSITION P. 0.1	NIVE SW (+	5.00% 50V

REF.NO.	PART.NO	DESCRIPTION		REM	ARK	REF NO.	PART.NO	DESCRIPTION		REM	ARK
08104	1-115-416-11	CERAMIC CHIP	0.00108	5.00%	25 <b>V</b>	08831	1-102-228-00	CERAMIC	470PF	10.00%	500V
CB105	1-126-947-11		470F	20.00%		C8832	1-126-941-11	ELECT	470UF	20.00%	
C8106	1-162-964-11			10.00%		C8833	1-126-941-11	ELECT	470UF	20.00%	
				10.00%		C8834	1-102-228-00	CERAMIC	470PF	10.00%	
C8108	1-162-970-11								470PF		
C8109	1-126-947-11	ELECT	470P	20.00%	350	C8835	1-102-228-00	CERANIC	4 / UPE	10.00%	30UV
C8112	1-164-227-11	CERAMIC CHIP	0.022UF	10.00%	25 <b>V</b>	C8836	1-123-024-21	ELECT	33UF		160V
08113	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V	C8841	1-126-947-11	ELECT	470F	20.00%	35V
C8114	1-126-964-11	ELECT	1007	20.00%	50 <b>V</b>	C3844	1-115-513-21	FILM	0.18UF	5.00%	250V
08115	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50 <b>V</b>	C8360	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
08116	1-115-416-11			5.00%		03861	1-162-927-11	GERAMIC CHIP	100PF	5.00%	50 <b>V</b>
33210	1.0	52144110 5311	,	3.03.	,	:					
23117		DERAMIC CHIP		5.00€		1	< CONNECT	CR >			
03113	1-162-970-11	CERAMIC CHIP	).010 <b>F</b>	10.30%	25 <b>V</b>						
79113	1-107-326-11	CERAMIC CHIP	1.198	10.00%		, CN8600		PLUG. CONNEC			
08124	1-125-891-11	CERAMIC CHIP	0.470F	10.00%	13 <b>V</b>	CN8631	1-316-380-11	PLUG CONNECT	TOR 3P		
39125	1-162-968-11	CERAMIC CHIP	0.0047UF	10.30%	50V	D/3611	1 1-135-270-12	PIN, DY CONN	ECTOR (PC 3	CARD)	
						CN8612	* 1-316-979-51	PLUG. CONNECT	FOR 3P		
03126	1-165-176-11	CERAMIC CHIP	3.047UF	10.00%	16V	CN9614	* 1-364-508-11	PLUG. CONNECT	OR SP		
39128		CERAMIC CHIP		10.00%	50 <b>V</b>	i					
C8130		CERAMIC CHIP		5.00%	50V	CN8616	1-695-915-11	TAB : CONTACT			
C8131	1-126-964-11		100F	20.00%		CN8620	1-764-333-11	PIN, CONNECTO		YPE) 10P	
C8132	1-164-230-11			5.00%				PLUG, CONNECT			
00132	1-104-230-11	CENTRIC CULT	22011	3.007			1 201 020 02				
C8134	1-102-935-00	CERAMIC	2PF	0.25PF	50V	Ì	< DIODE >				
C8135	1-126-364-11	ELECT	10 <b>0F</b>	20.00%	50V						
C8136	1-126-964-11	ELECT	10UF	20.00%	50V	D8102	3-719-081-97	DIODE MOLDIS	451		
03209	1-164-315-11	CERAMIC CEIP	470PF	5.00%	50V	08103	3-719-081-97	DIODE MMDL91	471		
C8210	1-162-964-11	CERAMIC CHIP	0.0019F	10.00%	50 <b>V</b>	08104	3-719-081-97	DIODE MMDL91	471		
						08135	5-719-081-37	DIODE MADL91	4T1		
C3801	1-126-947-11	ZLECT	470F	20.00%	35V	08107	3-719-081-37	DIODE MMDL91	4T1		
C8802	1-126-960-11	ELECT	IUF	20.00%	50 <b>V</b>						
C8803	1-126-960-11		10F	20.00%	50V	D8108	8-719-921-40	DIODE MTZJ-4	.7C		
C8804	1-102-114-00	CERAMIC	470PF	10.00%	50 <b>V</b>	D8128	8-719-081-97	DIODE MADL91	4T1		
C8905	1-102-114-00	CERAMIC	470PF	10.00%		08132	8-719-081-97	DIODE MADL91	471		
				******		38133	3-719-081-97	DIODE MADL91			
C8808	1-102-030-00	CTRANTC	330PF	10.00%	รถถบ	D8199	3-719-081-97	DIODE MADL91			
C8809	1-102-030-00		330PF	10.00%		1					
	1-102-350-35		0 04707	10.00%		08611	3-719-081-97	DIODE MMDL91	4m1		
28810	1-107-368-11	MYLAR	0.04702	10.00%		08612	3-719-081-97				
C8811									411		
C8812	1-162-131-11	CERAMIC	220PF	10.00%	2KV	D8803	3-719-200-32				
				TA 00-	2007	D8905	3-719-302-43				
C8813	1-162-134-11		470PF	10.00%		D8806	3-719-979-35	DIODE EGP20G			
C8814	1-117-641-11		7500PF	3.00€				*****			
08815	1-117-336-11		6800PF	3.00%		D8307		DIODE 33L200			
C3816	1-162-964-11	CERAMIC CHIP		10.00%		D8808		DIODE S3L200			
C9817	1-125-393-11	PILM	580PF	3.00%	1.5KV	08811	3-719-110-41				
						08818	3-719-109-39				
C8818	1-125-893-11	FILM	580 <b>PF</b>	3.00%	1.5KV	D8819	3-719-050-38	DIODE MIMAIS	2WK-T1		
08819	1-125-893-11	FILM	580PF	3.00%	1.5KV						
08820	1-125-893-11	FILM	580PF	3.00%	1.5KV	03820	3-719-081-97	DIODE ANDF31	4T1		
C8824	1-107-346-11	FILM	0.10P	5.00%	400V	D8859	3-719-081-37	DIODE MOL91	4T1		
C8825	1-117-663-11	FILM	0.22UF	5.00%	250 <b>V</b>	D8860	3-719-110-41	DIODE RD15ES	B2		
20226	1 115 510 11	27.14	n come	5.00%	25017		< FERRIT	, ukau /			
08826	1-115-520-11		0.68UF				( 1183.11	, UMAGE ,			
09827	1-107-346-11	FILM	0.10F	5.00%			1 110 007 21	75777777	1 100		
3823	1-127-681-11		100002F	23	100V	FB8807	1-410-397-31	15/0/175	1.1UH		
13929	1-127-630+11		170027	23	100A						
18930	1-107-686-01	:::C**	1773	10 161	356A						

REF.NO.	PARTINO	DESCRIPTION REI	MARK REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTIO!	4		REMARK	REF.NO.	PART.NO	DESCRIPTION			REMARK
	< IC >		08806	8-729-047-59	TRANSISTOR STP5NB40FP		R8149	1-216-837-11	METAL CHIP	22K	5%	1/10W	28808	1-260-340-11	CARBON	10K	5% 1	1/2W
	(10)		08807		TRANSISTOR UN2213		R8150	1-216-837-11		22K		•	R8809	1-260-340-11		10K		1/21
IC8100	8-759-659-67	TC 116303D1T.	Q8822		TRANSISTOR MSD601-RST1		R8153	1-216-295-91		0	••	-,	R8810		METAL OXIDE			
	8-759-659-67		08823		TRANSISTOR UN2111		R8154	1-216-830-11		5.6X	59	1/109	R8811		METAL OXIDE			
IC8101			20023	0 125 424 00	INMICIDION CHEILI		R8155	1-218-330-11					R8812		METAL OXIDE			
IC8102		IC NJM3404AD-W		< RESISTO	י פו		V9133	1-200-790-11	MEIAN CHIP	1.74	0.50	1/10#	KUUIZ	1 213 030 00	MINI ONLD	4.74		
IC8103	8-759-659-67	TC (WP23A3DTP		/ VENTOIN	M /		20150	1 200 200 11	LORDAY COTTO	2.25	A E2	1/109	38813	1 015 005 11	METAL OXIDE	2 25	5% 2	) ##
			20100	1 216 212 11	ב מבו ביווים זומים ב	1 / 1 0 12	R8158	1-208-790-11										
	< COIL >		R8100		METAL CHIP 220 5%		R8159	1-208-790-11		2.2K	U.35	1/10#	R3814		METAL OXIDE		5% 2	
			R8101	1-216-813-11		1/10W	38160	1-216-295-91		0			38815		METAL OXIDE		5% 2	
18901	1-410-397-21		R8102	1-216-825-11		1/10W	38151	1-208-302-11		6.3K			33816		METAL DXIDE			
18302	1-410-397-21	FERRITE 1.1UB	R8103		METAL CHIP 2.2K 5%	1/10W	R8162	1-215-321-11	METAL CHIP	1K	5%	1/10W	R8817	1-216-361-00	METAL CXIDE	0.22	38 2	Ä
L3803	1-410-397-21	FERRITE 1.1UH	R8104	1-216-325-11	METAL CHIP 2.2K 5%	1/10W												
							R8163	1-216-933-11	METAL CHIP	10K	5%	1/10W	33313	1-249-405-11	CARBON	100	58 1	, 4¥
	< INDUCTOR	₹>	R8105	1-216-921-11	METAL CHIP 1K 53	1/10W	R8164	1-203-914-91	METAL CHIP	22 <b>K</b>	3.58	1/18W	38819	1-247-307-31	CARBON	100	31 1	./4%
			38106	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	R8165	1-108-330-11	METAL CHIP	100 <b>K</b>	0.5%	1/10W	28831	1-260-124-11	CARBON	120K	34 1	./2W
178901	1-406-985-11	INDUCTOR 2.2MH	R8197	1-208-792-11	METAL CHIP 2.7K 0.5%	1/10W	38168	1-116-829-11	METAL CHIP	4.7K	58	1/10%	33833	1-202-972-61	FUSIBLE	1	31 1	./4%
			R8108	1-208-792-11	METAL CHIP 2. "K 0.5%	1/10W	38169	1-209-830-11	METAL CHIP	100K	3.5%	1/10W	38834	1-260-288-11	CARBON	9.47	5% 1	./27
	< TRANSIST	ror >	R8109	1-208-814-91	METAL CHIP 22K 0.5%	1/10W												
			1				R8170	1-216-815-11	METAL CHIP	330	53	1/10W	28835	1-250-288-11	CARBON	0.47	5% 1	./2W
Q8100	2_*20_010_20	TRANSISTOR MSD601-RST1	R8110	1-208-814-91	METAL CHIP 22K 0.5%	1/10W	R8171	1-216-825-11		2.2K			R8842	1-260-328-11		1K		./2W
•		TRANSISTOR MSD601-RST1	R8111	1-216-825-11			R8174	1-216-837-11		22K			R8844		METAL CHIP			
Q3101 09102		TRANSISTOR MSD601-RST1	R8112	1-216-825-11			R8175	1-216-337-11		4.7K			R8945	1-216-933-11		10K		
Q8102			R8113	1-216-833-11		1/10W					35	1/10#	1					
Q8103		TRANSISTOR MSD601-RST1		1-216-833-11			R8176	1-216-864-11	SHORT CHIP	U			R8865	1-210-023-11	METAL CHIP	4.78	36 1	/ 1UM
28104	8-729-010-29	TRANSISTOR MSD601-RST1	R8114	1-710-933-11	METAL CHIP ION 30	1/10#							1					
						. (****	R8177	1-216-830-11					: R8866	1-216-295-91		0		
Q8105		TRANSISTOR MSD601-RST1	R8115	1-216-845-11			R8179	1-216-329-11				1/10W	28867	1-216-829-11		4.7K		
Q8106	3-729-010-2 <b>9</b>	TRANSISTOR MSD601-RST1	R8116	1-216-845-11		1/10W	R8180	1-216-825-11	METAL CHIP	2.2K	58	1/10W	R8885	1-208-854-11		iM		
28107	3-729-010-2 <b>9</b>	TRANSISTOR MSD601-RST1	R8117	1-216-833-11		1/10W	R8181	1-216-295-91	SHORT CHIP	0			R8886	1-208-834-11	METAL CHIP	150K	0.5% 1	./10W
Q810 <b>8</b>	3-729-010-05	TRANSISTOR MSB709-RT1	R8118	1-216-833-11		1/10W	R8132	1-215-841-11	METAL CHIP	47K	5%	1/10W	38387	1-216-841-11	METAL CHIP	47K	58 1	./10W
Q8110	8-729-010-05	TRANSISTOR MSB709-RT1	R8119	1-216-833-11	METAL CHIP 10K 5%	1/10%							1					
							R8183	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R8888	1-249-441-11	CARBON	100K	5% 1	./4¥
Q8112	8-729-010-29	TRANSISTOR MSD601-RST1	R8120	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	R8186	1-216-826-11	METAL CHIP	2.7%	5%	1/10W	28895	1-249-443-11	CARBON	0.47	5% 1	./4W
28113	8-729-010-29	TRANSISTOR MSD601-RST1	R8121	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	R8188		METAL CHIP	4.7K	5%	1/10W	R8896	1-249-443-11	CARBON	0.47	5% 1	./4W
08115		TRANSISTOR MSB709-RT1	R8122	1-216-825-11	METAL CHIP 2.2K 5%	1/10W	R8189		METAL CHIP			1/10W	R8997	1-215-485-00			18 1	
08118		TRANSISTOR MSD601-RST1	R8123	1-216-841-11	METAL CHIP 47K 5%	1/10W	R8190		METAL CHIP				R8898	1-215-493-00			18 1	
Q8119		TRANSISTOR MSB709-RT1	R8124		METAL CHIP 1K 5%	1/10W	10270	,2,	ALLE CALL	2.54	٠.	1, 100					• •	,
20	, ., .,						R8191	1-215-025-11	METAL OXIDE	225	51	3W	33899	1-215-493-00	MEMAI	14	13 1	/AW
20120	2-720-310-05	TRANSISTOR MSB709-RT1	R8125	1-216-825-11	METAL CHIP 2.2K 5%	1/10W				0.47		-	. 22333	7-212-493-00	STAR		• • •	(18
28120		TRANSISTOR MSB709-RT1	R8126		METAL CHIP 330 5%		R8196	1-249-377-11							numn .			
28122			R8127		METAL CHIP 4.7K 0.5%		R8197		METAL CHIP					< TRANSFO	RMER >			
28123		TRANSISTOR MSB709-RT1	1				R8203		METAL CHIP		0.54	1/10W						
Q8125		TRANSISTOR MSD601-RST1	R8128		METAL CHIP 47K 0.5%		R8209	1=216-295-91	SHORT CHIP	0			73801		TRANSFORMER,			
28126	8-729-010-05	TRANSISTOR MSB709-RT1	R8129	1-208-822-11	METAL CHIP 47K 0.58	1/1UW							T8802		TRANSFORMER,			
						1 /1 000	R8210		METAL CHIP				78806	1-437-614-11	TRANSFORMER,	HORIZON	TAL CUT	PUT
28127		TRANSISTOR MSB709-RT1	R8130		METAL CHIP 470K 0.58		R8211	1-216-833-11		10 <b>K</b>			<u> </u>					
Q8128		TRANSISTOR MSD601-RST1	R8131	1-216-815-11			R8212	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	* A-130	0-530-A D2	Board, Com	plete		
Q813 <b>2</b>	3-729-421-19	TRANSISTOR UN2213	R8132		METAL CHIP 330 5%		38215	1-208-814-91	METAL CHIP	22K	0.5%	1/10W	-					
Q8135	8- <sup>-</sup> 29-010-2 <b>9</b>	TRANSISTOR MSD601-RST1	R8133	1-216-815-11	METAL CHIP 330 5%	1/10W	R8216	1-208-841-11	METAL CHIP	47K	5%	1/10W	i	3-710-578-01	COVER, VOLUME	, 6 MCL	D	
28136	3-729-010-05	TRANSISTOR MSB709-RT1	R8136	1-208-822-11	METAL CHIP 47K 0.58	1/10W								4-382-854-01	SCREW (M3X8)	, ?, S¥	(+)	
-							R8217	1-216-833-11	METAL CHIP	10 <b>K</b>	5%	1/10W	i					
Q8137	3-729-010-29	TRANSISTOR MSD601-RST1	R8137	1-208-822-11	METAL CHIP 47K 0.59	1/10W	R9456	1-216-845-11					İ	< CAPACII	FOR >			
28201		TRANSISTOR MSD601-RST1	R8138	1-208-822-11	METAL CHIP 47K 0.59	1/10W	R8457	1-216-834-11										
28202		TRANSISTOR MSD601-RST1	R8139		METAL CHIP 47K 0.5								26302	1-130-483-00	MYTAR	0.01UF	5	.00% 50V
Q8455		TRANSISTOR MSD601-RST1	R8140		METAL CHIP 2.2K 5%		R8458	1-216-841-11					J5802		CERAMIC CHIP			0.00% 16V
_		TRANSISTOR 2SC2688(5)-LK	R8141		METAL CHIP 22K 0.5		R8459	1-416-825-11	METAL CHIP	2.2K	25	1/1UW	1	1-136-813-11		580PF		.00% 10V
Q8801	327-040-4/	TUMBISION ESCESSED (3) - PW	20141	7 500 014 11		. =1===						1.11	3680 <b>4</b>					
-1		WARRANTOMOR 1400400451 17	20110	1 200 202 11	יי איני מינים זויים אינים אינים	1 1/100	R8800	1-147-395-91		470K			. 26805	1-126-964-11		103F		0.00≩ 50V
28302		TRANSISTOR 2SC2688(5)-LX	R8142		METAL CHIP 7 EK 0.5		R8804	1-149-408-11		180			15896	1-128-551-11	SLECT	220 <b>2</b>	20	0.00% 63V
28933	3-129-056-16	TRANSISTOR 2SC5698-SONY-CA	R8143		METAL CHIP 2 IX B		38905	1-149-408-11	LARBON	130	33	174%						
			20115	1 014 005-11	AEIMT CHIB - S JK - 23	1.1.2							4000	1 100 400 00	107.10	). 17 <b>7</b>	= =	20¥ 50V
28804 28805		TRANSISTOR 2805696-30NY-0A TRANSISTOR 1RF614-305	38145 38146		METAL TRIP 2 2K 0 5		R8906	1-049-481-81	CARBON	330	33	-: 47	36807 35808	1-130-435-00 1-125-347-11		1777		3 168 3 <b>5V</b>

- 59 -

Note: The components identified by shading and marked a are critical for sately. Replace only with the part numbers specified in the parts list.

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									سسبيا			لسب								
REF NO.	PARTINO	DESCRIPTION		REMARK	REF.NO.	PART,NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	A		REMARK	REF.NO.	PART.NO	DESCRIPTION		REMARK	<u></u>
			2.200777	10 300 500	06811	0_710_011_10	DIODE 188119-25			. 016 011 11	WORLD OUT		= 1	1/10se	36875	1_216_963_11	METAL CHIP	2 3M 53	1/10₩	
C6809	1-162-966-11			10.00% 50V					R6801	1-216-841-11		47X		1/10W				470K 18		
C6810	1-162-115-00	CERAMIC	330PF	10.00% 1KV	D6813		DIODE 188119-25		R6802	1-216-849-11	METAL CHIP	220K		1/10W	R6876	1-215-485-00				
C6811	1-162-115-00	CERAMIC	330PF	10.00% 1KV	D6814		DIODE MTZJ-30C		R6803	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R6877	1-215-485-00		470K 18		
C6812	1-135-946-22		47000PF	3% 800V	D6815	8-719-911-19	DIODE 1SS119-25		R6804	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R6878	1-216-821-11	METAL CHIP	1K 5%	1/10W	
C6813	1-126-967-11		470F	20.00% 50V	D6816	8-719-110-41	DIODE RD15ESB2		R6805	1-215-481-00		330K	18	1/4W	R6880	1-219-751-51	METAL	47K 5%	1/2W	
C0013	1-120 301 11																			
	1-126-947-11	77 P/W	47UF	20.00% 35V	D6817	8-719-063-73	DIODE DINL20U-TR		R6806	1-215-481-00	MPTAT.	330K	1%	1/49	R6881	1-219-749-51	METAL	10K 5%	1/2₩	
C6814				5.00% 50V	D6820	8-719-921-63	DIODE MTZJ-7.5B			1-215-481-00		330K			36882	1-216-841-11		47K 5%	1/10%	
C6815	1-130-483-00		0.01UF		06821		DIODE RD18ESB2		R6807						36883	1-211-985-11		47 0.5		
06816	1-126-964-11		100 <b>F</b>	20.00% 50V	06822		DIODE DINL20U-TR		R6808	1-211-981-11		33						13K 0.5		
C6820	1-130-495-00	MYLAR	0.1UP	5.00% 50V	56823		DIODE 158119-25		R6809	1-218-823-11		100			R6884	1-218-874-11				
06821	1-126-964-11	ELECT	100F	20.00% 50V	56823	94:194911419	010DF 129113-52		R6810	1-249-417-11	CARBON	1.K	5%	1/4W	R6885	1-216-841-11	METAL CHIP	47K 5%	1/10#	
							2000 120110 1E													
06822	1-125-966-11	RLECT	330F	20.00% 50V	06824		DIODE 188119-25		R6811	1-202-933-51	FUSIBLE	0.1	10%	1/2W	R6887	1-249-411-11	CARBON	330 5 <del>1</del>	1/4W	
06823	1-126-933-11		1000F	20.00% 16V	56825		DIODE 188119-25		R6812	1-218-369-11		3.28	0.54	1/10W	36894	1-216-340-11	METAL DELP	39K 53	1/10₩	
				20% 250V	06831	3-719-911-19	DIODE 188119-25		R6813	1-249-393-11			5%		3,6896	1-216-839-11	METAL CHIP	33K 5%	1/10%	
C6824	1-113-610-11				06832	3-719-911-19	DIODE 188119-25								36897	1-216-853-11		470K 53		
05825	1-130-495-00		0.10F	5.30% 50V	08919	3-719-948-45	DIODE ERA22-08		26314	1-249-393-11				1/4₩						
06826	1-126-969-11	SLECT	229U <b>F</b>	20.00% 50 <b>V</b>					36815	1-216-933-11	METAL CHIP	1JK	33	1/10%	38949	-14_0-405-4	METAL DXIDE	5.48 05	2#	
					28927	9-719-991-99	DIODE 138133T-77													
06827	1-137-150-11	FILM	0.010F	5.00% 100V	20321	3 -13 731 33			R6816	1-216-833-11	METAL CHIP	10K	53	1/10W	R8950		METAL DXIDE			
06834	1-162-970-11		0.01UF	10.00% 25V					R6317	1-243-979-21	METAL OXIDE	0.1	5%	2¥	28951	1-216-486-21	METAL CXIDE	8.2K 5%	3 <b>W</b>	
06835	1-127-715-91			10% 16V		< FERRIT	. 3EAU >		R6818	1-249-389-11	CIRRON	4.7	5%	1/4W	38952	1-216-486-21	METAL CXIDE	8.2K 5%	3 <b>W</b>	
				5.00% 50V								22K		1/10W	28954	1-260-123-11	CARRON	100K 5%	1/2W	
C683 <b>6</b>	1-136-165-00		0.10 <b>F</b>		FB6801	1-412-911-11	FERRITE OUB		R6820	1-216-837-11					R8955	1-260-123-11		100K 5%		
C6837	1-136-103-00	PILM	0.10 <b>F</b>	5.00% 200V					R6821	1-216-837-11	METAL CHIP	22 <b>K</b>	28	1/10W	10333	1-200-123-11	CARDUN	TOOK 15	1, 2 H	
					-	< IC >										4 000 100 11	as a nove	***** **	1 (09	
C6840	1-130-495-00	MYLAR	0.1UP	5.00% 50V	į				R6823	1-247-843-11	CARBON		5€		R8956	1-260-123-11		100K 5₹		
06842	1-130-471-00	MYLAR	0.001UF	5.00% 50V	IC6800	8-759-670-30	IC MCZ3001D		36825	1-218-912-11	METAL CHIP	510 <b>K</b>	0.5%	1/10W	R8957	1-216-829-11	METAL CHIP	4.7K 5%		
C6843	1-135-945-22	FILM	10000PF	3% 800V	IC6801		IC NJM2903M		R6827	1-216-849-11	METAL CHIP	220K	5%	1/10W	R8988	1-260-123-11	CARBON	100K 5%		
C6348	1-126-963-11		4.7UF	20.00% 50V			IC NUM2904M		R6828	1-218-395-11	METAL CHIP	100 <b>K</b>	0.5%	1/10W	28989	1-249-429-11	CARBON	10K 5%	1/4%	
	1-162-962-11			10.00% 50V	106802				R6829	1-216-841-11		47K			R8990	1-216-840-11	METAL CHIP	39K 5%	1/10W	
C5849	1-102-902-11	CERAMIC COIL	41055	10.500 501	106803		IC TLV431AIDBV		80023	1-510-241-11	MEINE CHIF	4.5	23	1/100				•••	.,	
					106807	3-759-586-17	IC TL1431CZ-AP								22221	1 21/ 22/ 11	ACCUSE ACCUSE	12K 5%	1 / 109	
C6850	1-107-826-11			10.00% 16V	1				R6832	1-216-841-11		47K		1/10W	R8991	1-216-834-11	METAL CAIP	12K 36	1/10#	
C6852	1-162-970-11	CERAMIC CHIE	0.01 <b>0F</b>	10.00% 25V		< COIL >			R6833	1-216-833-11	METAL CHIP	10 <b>K</b>	5%	1/10W						
C6853	1-126-933-11	ELECT	1000F	20.00% 16V	ŀ				R6834	1-216-821-11	METAL CHIP	-1K	5%	1/10W		< RESISTY	OR VARIABLE >			
C8929	1-107-635-11		4.70F	20.00% 160V	L6802	1-419-658-41	INDUCTOR 107UE		R6835	1-215-433-00	MRTAL	3.3K	13	1/4W						
C8930	1-129-898-00		0.0022TF	5.00% 630V	18901	1-406-674-11			R6836	1-215-449-00		15K		1/4W	RV6800	1-241-763-11	RES, ADJ, CE	RMET 4.7K		
23730	1 127 171 11				20301	. 100 0/1 12														
08932	1-136-205-11	WV: 70	0.022UF	5.00% 630V		< TRANSI	STYCE >		R6837	1-215-449-00	WETAT.	* 57	1%	1/4₩		< SPARK 3	GAP >			
******	1-162-131-11		220PF	10.00% 2KV		( 1144102			R6838	1-215-445-00			13		i					
C893 <b>8</b>				10.00% 2KV	00000	0 200 001 01	TRANSISTOR 2SC2412K-T-	-146-3							SG6800	1-517-499-21	CID COIDE			
09939	1-162-129-00		150PF		Q6301				R6839	1-215-447-00			13	1/4#	360000	7-371-433-57	GAP, SPARK			
C8944	1-137-150-11		0.01UF	5.00% 10 <b>0V</b>	26802		TRANSISTOR 2SC2412K-T-		R6840	1-535-303-00	LEAD, JUMPE	r (5 Cmm	1)							
C8345	1-126-947-11	ELECT	470F	20.00% 35V	Q6803		TRANSISTOR 2SC1623-L51		R6841	1-218-847-11	METAL CHIP	18	0.5€	1/10W		< TRANSFY	DRMER >			
					Q6804	8-729-044-42	TRANSISTOR IRF1644G-LE	F36												
C8953	1-164-004-11	CERAMIC CHI	P 0.10P	10.00% 25V	Q6805	8-729-044-42	TRANSISTOR IRF1644G-LI	F36	R6843	1-218-845-11	METAL CHIP	820	0.5%	1/10W	T6800 ∌	1-453-378-21	TRANSFORMER	assy, plyb	ACR (NX-6020)	1/(2214)
									R6844		METAL CHIP			1/10W		1-437-690-11				A
	,	mon >			06807	8-720-128-29	TRANSISTOR 2SC1623-L5	IL6							15301	030 11		l	,	
	< CONNEC	TOK >			, ~		FRANSISTOR 2SC1623-L5		R6845						22.00	00-358-A A E	loard Cor	lote (KV)	9E070B)	
					Q6808				R6846											
	* 1-816-979-51				26813		TRANSISTOR 2SB709A-QR	2-1X	R6847	1-218-847-11	METAL CHIP	2K	0.5€	1/10%		00-167-A AE				
CN6801	* 1-691-772-11	PLUG (MICRO	CONNECTOR)	10P	Q6814		TRANSISTOR DTC114EK								* A=130	00-601-A A E	oard, Comp	iete (KV-2	(of Q700)	الكبير
CN6803	1-695-915-11				26815	8-729-424-02	TRANSISTOR 2SB709A-QR	S-TX	36848	1-216-817-11	METAL CHIP	470	5%	1/10W						
	* 1-564-506-11				'				R6852		METAL CHIP			1/10W	A Boa	rd, Common	Parts			السير
iii00∪4	- "-764-709-11	: DUG, COME	C.O. J.		Q6816	8-729-900-5	TRANSISTOR DTC114EK													
					Q6817		2 TRANSISTOR 2SB709A-QR	KS-TX	R6865		METAL CHIP			1/10W	1	4-382-854-01	SCREW (M3X8)	, P, SW (+	·)	
	< DIODE	>			08909		1 TRANSISTOR STP5NB40(0		R6867		METAL CHIP			1/10W						
					1 -			2271	R6868	1-216-797-11	METAL CHIP	10	5%	1/10W		< CAPACI	TOD S			
D6800	8-719-052-90	DIODE DINLA	0-TA2		28918	1-801-806-1	1 TRANSISTOR DTC144EKA								1		104 /			
06301	8-719-110-41	DIODE RD15E	SB2						R6869	1-216-833-17	1 METAL CHIP	COR	53	1/10W				100	20 222 - 2	<i>c</i>
06802		DICDE RD158				< RESIS	TCR >		R6870		1 METAL CHIP		5%		01001	1-126-933-11		100UF	20.00% 15	
26803		OICDE 1381													21002	1-126-964-11	ELECT	10 <b>07</b>	20.00% 50	QV
	5- 19-911-19				JR6814	1-216-364-1	1 SHORT CHIP )		26872	1-249-377-11				1/49	01004	1-163-021-91	. CERAMIC DEL	9.015 <b>F</b>	10.001 50	ΟV
	1 110								36873	1-249-431-11	TAPRON	: • ₹	5%	1/4W					20.00% 16	c
26306	3-119-109-85	DICOE ROS.	.2004		JR6395	1-316-864-1	: SHORT CHIP O		35874		1 VETAL TELP				01006	1-126-333-11	SLECT	1000F	29.505 25	5 ¥

			2511.01	pre vo	2407.110	DESCRIPTION	REMARK	BEF.NO.	PART NO	DESCRIPTION	REMARK	REF NO.	PART.NO	DESCRIPTION	REMARK
REF.NO.	PART NO	DESCRIPTION	REMARK	REF.NO.	PART.NO			C2517	1-126-960-11	ELECT 10F	20.00% 50V	C5106	1-126-933-11	ELECT 100UF	20.30% 16V
01008	1-163-021-91	CERAMIC CHIP 0.01UF	10.30% 50V	C2054	1-126-947-11		20.00% 35V	C2518	1-126-960-11		20.00% 50V	C5109	1-126-964-11		20.00% 50V
C1009		CERAMIC CHIP 68PF	5.00% 50V	C2055		CERAMIC CHIP 0.004707	10.00% 50V	C2519	1-126-359-11		20.00% 50V	C5110	1-126-947-11		20.00% 35V
C1010		CERAMIC CHIP 68PF	5.00% 50V	C2057	1-126-964-11		20.00% 50V	C2521		CERAMIC CHIP 0.22UF	10.00% 16V	C5111	1-126-964-11		20.00% 50V
C1014	1-126-933-11		20.00% 16V	C2058		CERAMIC CHIP 0.10F	10.00% 25V	C2523		CERAMIC CHIP 0.10F	10.00% 50V	C5112	1-126-964-11	ELECT 10UP	20.00% 50V
C1015		CERAMIC CHIP 0.01UF	10.00% 50V	C2059	1-126-964-11	KLECT 10UF	20.00% 50V	4323	1 111 333 11	J					
				20060	1-126-947-11	ELECT 47UF	20.00% 35V	C3200	1-126-964-11	ELECT 100P	20.00% 50V	C5114		CERAMIC CHIP 0.10F	25V
C1018		CERAMIC CHIP 0.22UF	10.00% 25V	C2060		CERAMIC CHIP 0.0047UF	10.00% 50V	C3202	1-104-666-11	ELECT 2200F	20.00% 25V	C5115	1-126-964-11		20.00% 50 <b>V</b>
C1020		CERAMIC CHIP 0.1UF	10.00≹ 25V	C2061			16V	C3203	1-126-964-11	ELECT 10UP	20.00% 50V	C5117	1-126-964-11		20.00₹ 50 <b>V</b>
01021		CERAMIC CHIP 0.0047UF	10.00% 50V	C2062		CERAMIC CHIP 1UP	16V	C3206	1-126-964-11	ELECT 100F	20.30% 50V	05113		CERAMIC CHIP 0.10F	25V
01022		SHORT CHIP 0		C2063		CERAMIC CHIP 10F	20.30≹ 50 <b>V</b>	C3208	1-163-235-11	CERAMIC CHIP 22PF	5.00% 50V	05119	1-107-823-11	CERAMIC CHIP 0.47UF	10.00% 16V
32000	1-162-968-11	CERAMIC CHIP 9.00470F	10.30¥ 50V	C2064	1-126-964-11	ELECT 10UF	20.300 307					1			
			10 201 500	02065	1_162_066_11	CERAMIC CHIP 0.0022TF	10.00% 50V	C3209	1-163-235-11	CERAMIC CHIP 12PF	5.00₹ 50 <b>V</b>	35120		CERAMIC CHIP 0.0470F	10.00₹ 16V
02001		CERAMIC CHIP 0.3047UF	10.00% 50V			TERAMIC CHIP 0.002277	10.00% 50V	03210	1-126-964-11	ELECT 130F	20.00% 50V	35121		CERAMIC CHIP 0.0470F	10.00₹ 1 <b>6V</b>
32996		CERAMIC CHIP 470PF	10.30% 50V	02066		JERAMIC CEIP J. 2207	10% 16V	33211	1-126-964-11	SLECT 190F	29.00% 50 <b>V</b>	15122	•	CERAMIC CHIP 0.10F	25 <b>v</b>
72007		CERAMIC CHIP 0.01UF	10.30* 50V	22069	1-126-960-11		20.00* 50V	03213	1-164-222-91	CERAMIC CHIP 3.220F	25V	25124		CERAMIC CHIP ).10F	25 <b>V</b>
22008		CERAMIC CHIP 0.001UF	10.30% 50V	22073	1-126-960-11		20.00% 50V	03214	1-164-122-91	CERAMIC CHIP 3 220F	25 <b>V</b>	15125	1-126-964-11	ELECT 100F	20.00% EOV
02009	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	- 02974	1-120-900-11	11001	231300								00 10: 16#
		CERAMIC CHIP 0.3010F	10.30% 50V	C2075	1-126-960-11	ELECT LUF	20.00% 50V	C3215		CERAMIC CHIF 1.22UF	25V	35300	1-126-933-11		20.00% 16V
02010			10.30% 50V	C2077	1-126-960-11		20.00% 50V	03216		CERAMIC CEIP 0.22UF	25 <b>V</b>	35331	1-126-947-11		20.30% 35V
02011		CERAMIC CHIP 470PF	10.00% 50V	C2078	1-126-963-11		20.00% 50V	C3217		CERAMIC CHIP 0.22UF	25V	C5302		CERAMIC CHIP 0.22UF	25V
C2012		CERAMIC CHIP 470PF	10.00% 50V	C2079		CERAMIC CHIP 0.10F	10.00% 25V	C3218		CERAMIC CHIP 0.220F	25 <b>V</b>	C5303	1-136-153-30		5.00% 50V
02013		CERAMIC CHIP 470PF	16V	C2080		CERAMIC CHIP 100PF	5.00% 50V	C3219	1-164-222-91	CERAMIC CHIP 0.22UP	25V	05304	1-164-182-11	CERAMIC CHIP 0.0033U	7 10.00% 50V
C2914	1-154-346-11	CERAMIC CHIP 10F	100								0511	25225	1 105 176 11	CERANIC CHIP 0.047UP	10.00% 16V
C2015	1_163_001_01	CERAMIC CHIP 0.01UF	10.00% 50V	C2081	1-162-928-11	CERAMIC CHIP 120PF	5.00% 50V	C3220		CERAMIC CHIP 3.22UF	25V	C5305		CERAMIC CHIP 0.10F	25V
C2015		CERAMIC CHIP 470PF	10.00₹ 50V	C2082	1-216-864-11	SHORT CHIP 0		C3221		CERAMIC CHIP 0.22UF	25V	C5306			25V
C2018		CERAMIC CHIP 470PF	10.00% 50V	C2083	1-162-964-11	CERAMIC CHIP 0.001TF	10.00% SOV	C3222		CERAMIC CHIP 1.22UF	25V	05307		CERAMIC CHIP 9.1UF CERAMIC CHIP 100PF	5.00% 50V
G2019		CERAMIC CHIP 1UF	16V	C2084	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C3223		CERAMIC CHIF 1.22UF	25V	05309			5.30% 50V
C2021		CERAMIC CHIP 470PF	10.30% 50V	C2085	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	03224	1-164-222-91	CERAMIC CHIP 3.22UF	25V	05310	1-136-165-00	FILM 0.10F	3.305 304
U2021	1-192-902 11	CIMPRICO CONT. 1.771						22205		consumo como a acomo	2517	05311	1_164_156_11	CERAMIC CHIP 0.10F	25V
C2822	1-162-966-11	CERAMIC CHIP 0.0022UF	10.00% 50V	C2086	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	C3225		CERAMIC CHIP 3.22UF	25V	C5312		CERAMIC CHIP 0.047UP	10.00% 16V
C2023		CERAMIC CHIP 0.0022UF	10.00% 50V	C2087	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3226		CERAMIC CHIP 3.22UF	25V	C5312	1-107-714-11		20.00% 50V
C2023		CERAMIC CHIP 1UF	16V	C2088	1-162-964-11	CERAMIC CHIP 0.001UF	10.00% 50V	C3227		CERAMIC CHIP 0.22UF	25V	C5314		CERAMIC CHIP 0.01UP	10.00% 25V
C2024		CERAMIC CHIP 470PF	10.00% 50V	C2089	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C3228		CERAMIC CHIP 0.22UF	10.00% 16V	C5314 C5316		CERAMIC CHIP 220PF	5,00% 50V
C2027	1-126-947-11		20.00% 35V	C2090	1-126-947-11	ELECT 47UF	20.00% 35V	C3229	1-164-489-11	CERAMIC CHIF 0.22UF	10.00% 16V	(2310	1-104-230-11	CERAMIC CHIP 220FF	3.00% 307
***								C3230	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V	05318	1-164-156-11	CERAMIC CHIP 0.10F	25 <b>V</b>
C2028	1-126-947-11	ELECT 47UF	20.30% 35V	C2091	1-126-947-11		20.00% 35V	03231		CERAMIC CRIP 3.22UF	10.00% 16V	05319	1-136-347-11		P 5.00% 630V
02029	1-164-346-11	CERAMIC CHIP 1UF	16V	C2092	1-126-947-11		20.00% 35V	C3232		CERAMIC CHIP 0.22UF	10.00% 16V	25320	1-129-716-00		
02031	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	C2093	1-126-947-11		20.00₹ 35V	C3233		CERAMIC CHIP 3.220F	10.00% 16V	25321	1-136-347-11		
22034	1-164-346-11	CERAMIC CHIP 10F	16V	C2094	1-126-947-11		20.00% 35V	C3234		CERAMIC CHIP 0.22UF	10.00% 16V	05322		CERAMIC CHIP 0.1UF	25V
02035	1-164-346-11	CERAMIC CHIP 1UF	16V	C2095	1-126-947-11	ELECT 47UF	20.00% 35V	6,72,74	. 111 107 12						
				72025	1 162 070 11	CERANIC CHIP 0.01UF	10.00% 25V	C3235	1-165-176-11	CERAMIC CHIP 9.947UF	10.00% 16V	C5323	1-136-159-00	FILM 0.0330F	5.00≹ 50V
C2038		CERAMIC CHIP 0.01UF	10.00% 25V	C2096			20.00% 35V	C3236		CERAMIC CHIP 3.3470F	10.00% 16V	C5400	1-126-964-11	ELECT 10UF	20.00% 50V
C2039		CERAMIC CHIP 1.5PF	0.25PF 50V	C2500	1-126-952-11		20.00% 35V	C3237	1-165-176-11	CERAMIC CHIP 0.047UF	10.00% 16V	C5401	1-107-714-11	ELECT 10UF	20.00% 50V
C2040		CERAMIC CHIP 0.001UF	10.00% 50V	C2502	1-104-666-11		25.00% 25V	C3238	1-165-176-11	CERAMIC CHIP 9.047UF	10.00% 16V	C5403	1-128-527-11	ELECT 330UF	20.00% 25V
C2041		CERAMIC CHIP 1.5PF	0.25PF 50V	C2504		CERAMIC CHIP 0.22UF	10.00% 50V	C3239	1-165-176-11	CERAMIC CHIP 0.047UF	10.30% 16V	05404	1-102-223-30	CERAMIC 470PF	10.30% 500V
C2042	1-216-864-11	SHORT CHIP 0		C2505	1-115-339-11	CERAMIC CHIP 0.1UF	10.506 504								
		MEDIANTO CETO 270DE	10.00% 50V	C2506	1-126-972-11	1 ELECT 1000UF	20.00% 50V	C3240	1-165-176-11	CERAMIC CHIP 3.3470F	10.00% 16V	25405	1-163-021-91		10.30% 50V
C2043		CERAMIC CHIP 470PF	10.00% 50V	C2507		CERAMIC CHIP 220PF	5.00% 50V	C3241	1-126-933-11		20.00% 16V	C5406	1-129-702-00		
C2044		CERAMIC CHIP 0.01UF	5.00% 50V	C2508		1 CERAMIC CHIP 220PF	5.00% 50V	C3242	1-162-970-11	CERAMIC CHIP 0.010F	10.00₹ 25V	25407	1-128-527-11		20.00% 25V
C2046		CERAMIC CHIP 47PF	5.00% 50V	C2509		1 CERAMIC CHIP 220PF	5.00% 50V	C3243		CERAMIC CHIP 0.22UF	25V	25409	1-126-968-11		20.00% 50V
C2047	1-162-927-11	CERAMIC CHIP 100PF	20.00% 35V	C2510		1 CERAMIC CHIP 0.022UF	10.00% 25V	C3245	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C5410	1-163-021-91	CERAMIC CHIP 0.010F	10.00% 50V
C2048	1-179-24 (-1)	L SHECT TIVE	20.000 331	3										10111B 0 000	E 104 105#
C2049	1-162-925-1	CERAMIC CHIP 68PF	5.00% 50V	C2511	1-163-021-9	1 CERAMIC CHIP 0.01UF	10.00% 50V	C3250		CERAMIC CEIP 0.010F	10.30% 50V	05411	1-137-401-11		5.30% 100V
32050		1 CERAMIC CHIP 0.47UF	10.30% 16V	02512	1-163-021-9	1 CERAMIC CHIP 0.0107	10.00% 50V	C3300		CERAMIC CHIP 100PF	5.30% 50V	25412	1-106-220-00		10.30% 100V
32050 32051	1-126-964-1		20.30% 50V	C2513	1-126-952-1		20.00% 35V	C3309	1-126-364-11		20.30% 50V	05413	1-130-785-11		
22952		1 CERAMIC CHIP ().10F	10.00% 25V	72515		1 CERAMIC CELP 3.32207	10.30% 25V	C3310		CERAMIC CEIF 1.2207	25V	25414	1-126-964-11		20.00% 50 <b>V</b>
12 153		CERAMIC CHIP 1.0220F	10.00% 25V	02516	1-126-953-1		20.00% 35V	25103	1-126-360-11	. ELECT UTF	20.00% EGV	55801	1-126-963-11	ELECT 4 TOF	20:00+ 80V

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REF.NO.	PARTINO	DESCRIPTION		REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK	PEF.140.	PARTINO	DESCRIPTION	REMARK	REF VO.	PART NO.	DESCRIPTION		REMARK
									00113	8-719-921-88	DIODE MTZJ-13B		05813	3-719-081-97	DIODE MMDL914	71	
05850	1-126-963-11		. TUE	20.00% 50V	C7050		CERAMIC CHIP 100PF	5.00% 50V	01006	8-719-109-89	DIODE RD5.6ESB2		05814	1-216-295-91	SHORT CHIP	0	
05851	1-107-826-11	CERAMIC CHIP O	.10F	10.00% 16V	C7051		CERAMIC CHIP 0.10F	10.00% 25V	D2014	8-719-929-15	DIODE HZS9.1NB2		06200	3-719-063-70	DIODE DINL200		
C5854	1-107-826-11	CERAMIC CHIP 0	. 107	10.00% 16V	C7052		CERAMIC CHIP 0.10F	10.00% 25V	D2015	8-719-929-15	DIODE HZS9.1NB2		D7004	8-719-929-15	DIODE HZS9.1N	32	
C5858	1-107-826-11	CERAMIC CHIP 0	.10F	10.00% 16V	C7053	1-164-004-11	CERAMIC CHIP 0.10F	10.00% 25V	D2016		DIODE MIMA152WK-T1		D7006	1-216-809-11	METAL CHIP	100 5%	1/10W
C5859	1-126-960-11		OF	20.00% 50V	C7054	1-126-963-11	ZLECT 4.70F	20.00% 50V									
									D2018	8-719-929-15	DIODE HZS9.1NB2			< FERRITI	B BEAD >		
C5860	1-165-176-11	CERAMIC CHIP 0	.047UF	10.00% 16V	C7055	1-164-222-91	CERAMIC CHIP 0.22UF	25V	02019		DIODE HZS9.1NB2						
C5868	1-164-004-11	CERAMIC CHIP O	.10F	10.00% 25V	C7056	1-126-933-11	ELECT 100UF	20.00% 16V	D2500		DIODE MIMA152WK-T1		FB3001	1-414-760-21	FERRIFE	OUH	
05873		CERAMIC CHIP 1		5.00% 50V	C7057	1-164-222-91	CERAMIC CHIP 0.22UF	25V	02502		DIODE RD5.6ESB2			- /21 /40 22			
C5888		CERAMIC CHIP 0		25 <b>V</b>	C7058	1-126-933-11	ELECT 100UF	20.00% 16V	D2502		DIODE MIMAIS2WK-T1		-	< FILTER	,		
25889	1-126-964-11		OUF	20.00% 50V	C7059	1-126-933-11	ELECT 1000F	20.30% 16V	92303	3-113-020-30	21000 UTUBILIENE II			( 1101			
55005	,	-							03001	1 710 220 15	DIODE HZS9.1NB2		F12000	1-239-303-11	זעל בקייול		
25890	1-154-227-11	CERAMIC CHIP	122112	10.00% 25V	07060	1-164-222-31	CERAMIC CHIP 0.22UF	25V					. 3.44.000	1-239-505-11	112157 301		
25891	1-137-581-11		1.10F	5.00% 100V	07061		DERAMIC CHIP 0.10F	10.30% 25V	03003		DIODE HZS9.1NB2						
		CERAMIC CHIP		10.00% 15V	27062		CERAMIC CHIP 3.10F	10.00% 25V	03005		DIODE HZS9.1NB2			< 10 >			
35892					27063		MERAMIC CHIP ) 10F	10.00% 25V	23007		DIODE RD5. SESB2						
25993	1-126-947-11		170 <b>2</b>	20.00% 35V	27064	1-126-347-11		20.00% 25V	23008	3-719-109-89	DIODE RD5.5ESB2		102000		IC MSF3411G-QA	1-911	
25394	1-126-947-11	ELZCT 4	1777	20.00% 35V	C:004	1-120-94:-11	19901 4101	CV. 7V1 JUF					122001		IC UPC4558G2		
							WELLET ARTE 3 2277	25V	53009	3-719-929-15	DIODE HZS9.1NB2		102500	3-759-831-56			
25895		CERAMIC CHIP :		25 <b>V</b>	37065		GERAMIC CHIP 3.220F	25 25 25 25 25 25 25 25 25 25 25 25 25 2	53011	3-719-929-15	DIODE HES9.1NB2		103200		IC VSP94079-3	1-GEG	
25896		CERAMIC CHIP		10.00% 16V	C7067	1-126-947-11			03013	3-719-929-15	DIODE B2S9.1NB2		105102	3-759-325-48	IC CACCOSAD		
C5897		CERAMIC CHIP		10.00% 25V	C7068		CERAMIC CHIP 3.22UF	25V	03015	8-719-929-15	DIODE HZS9.1NB2		1				
05898		CERAMIC CHIP		10.00% 53 <b>V</b>	C7069		CERAMIC CHIP 22PF	5.00% 5CV	03017	8-719-109-89	DIODE RD5.6ESB2		IC5103	3-752-072-34	IC CXA1875AM-1	4	
25899	1-107-823-11	CERAMIC CHIP	.47UF	10.00≹ 16V	C7070	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50 <b>V</b>					105104	8-759-803-42	IC LA6500-FA		
									03018	8-719-109-89	DIODE RD5.6ESB2		IC5300	8-759-008-70	IC LM358N		
06200	1-126-933-11	ELECT :	1000 <b>F</b>	20.00% 16V	C7071	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V	03019		DIODE HZS9.1NB2		IC5301	8-759-659-67	IC LA6393DLL		
C6201	1-126-935-11	ELECT 4	70 <b>0F</b>	20.00% 16V					53021		DIODE HZS9.1NB2		IC5302		IC LA6393DLL		
C6202	1-126-933-11		OOUF	20.00% 16V	1	< CONNECT	xx >		03023		DIODE RD5.6ESB2						
36203	1-126-935-11		700F	20.00% 16V					03024		DIODE HZS9.1NB2		105400	8-759-696-71	TO COMPOSTOR		
J6204	1-126-933-11		1000 <b>F</b>	20.00€ 16V	CN0101	* 1-823-330-11	CONNECTOR, BOARD TO	BCARD 40P	93024	9-119-929-13	DIODE R459.1M54		IC6200		IC 17809CV/LSY		
23204	,,,				CN0102	* 1-564-520-11	FLUG, CONNECTOR SP		2222	2 710 200 15	PTOPE HEAT 11m2		IC6200		IC 17805CV/LS1		
26205	1-126-935-11	מיסריים (	470 <b>0F</b>	20.00% 16V	i		PLUG, CONNECTOR 4P		53026		DIODE HZS9.1NB2						
C6206	1-126-933-11		100UF	20.00% 16V			CONNECTOR (SQUARE TYP	E) 21P	03028		DIODE HZS9.1NB2		IC6202	8-759-445-59			
			100UF	20.00% 16V			CONNECTOR, DUAL SCART		03201		DIODE RD5.6ESB2		IC6203	8-759-098-24	IC PQ30RVII		
C6207	1-126-933-11		10001	20.00% 16V	CHIOVI	1 700 270 21	COMMECTOR, DOIL CORN.		D5101		DIODE MIMA152WK-T1						
C6208	1-126-933-11		1000F	20.00% 16V	CM2000	+ 1-564-512-11	PLUG, CONNECTOR 9P		05103	8-719-110-86	DIODE RD39ESB		IC6204		IC L78L33ABZ-F	₽	
C6209	1-126-933-11	ELECT .	TOOOE	20.003 104			PLUG, CONNECTOR 3P						IC6205	8-759-394-35			
					L .		PLUG, CONNECTOR 4P		05104		DIODE RD5.6ESB2		IC6206		IC LM78L05ACZ		
C6210	1-126-935-11		470UF	20.00% 16V			•		05300	8-719-081-97	DIODE MMDL914T1		IC7002	3-752-090-38	IC CXA2100AQ-1	L	
06211	1-126-947-11		470 <b>P</b>	20.00% 35V			PLUG, CONNECTOR 6P		05303	8-719-081-97	DIODE MADL914T1						
36212	1-126-933-11		100U <b>F</b>	20.00% 16V	CN5002	* 1-815-984-71	PLUG, CONNECTOR 7P		05304	8-719-081-97	DIODE MMDL914T1			< SOCKET	>		
36213	1-126-933-11		1000 <b>F</b>	20.00% 16V					<b>J5305</b>	8-719-991-33	DIODE 1SS133T-77						
06214	1-126-933-11	ELECT	1300 <b>F</b>	20.00% 16V			PLUG, CONNECTOR 3P						J2000	1-784-632-11	JACK, PIN 2P		
					1		PIN, CONNECTOR (PCB) (V		05306	8-719-302-43	DIODE EL12						
C7002	1-126-947-11		47UP	20.00% 35V			PLUG (MICRO CONNECTOR	) 10P	05307		DIODE ERASS-009			< COIL >			
C700 <b>4</b>	1-164-222-91	CERAMIC CHIP	0.22 <b>0F</b>	25V			PLUG, CONNECTOR 4P		05309		DIODE MMDL914T1			•			
27008	1-162-919-11	CERAMIC CHIP	22P <b>F</b>	5.00% 50V	CN6202	* 1-564-516-11	PLUG, CONNECTOR 13P		D5310		DIODE MMDL914T1		L1000	1-412-987-31	INDUCTOR	4.70H	
C7016	1-107-823-11	CERAMIC CHIP	0.47UF	10.00% 16V	1				25400		DIODE MTZJ-3.6A		11001	1-412-987-31		4.70H	
C7018	1-164-004-11	CERAMIC CHIP	0.15 <b>F</b>	10.00% 25V	CN6203	1-695-915-11	TAB (CONTACT)		33100	3 123 302 03	51055 11140 5.00		11002	1-414-934-21		1008	
					CN7000	* 1-817-042-81	PLUG, CONNECTOR 5P		25421	0 710-050-30	DIODE MIMA152WK-T1		L1002	1-414-934-21		100H	
C7019	1-164-004-11	CERAMIC CHIP	0.107	10.00% 25V	CN7001	* 1-564-512-11	PLUG, CONNECTOR 3P		22401				11005	1-414-934-21		100H	
C7920		CERAMIC CHI?		10.00% 25V			PIN, CONNECTOR (PC 30		55404		DIODE RD15ESB2		1,1003	1-414-234-51	INDUCION	LUVE	
C7021		CERAMIC CHIP		10.00% 25V			•		05405	9-719-908-03					TAID HORSE	1000	
C7022		CERAMIC CHIP		10.00% 25V		< DIODE	>		D5406		DIODE MMDL914T1		L2000	1-414-934-21		10UH	
C7022		CERAMIC CHIP		10.00% 25V					05407	8-719-081-97	DIODE MMDL914T1		1,2001	1-414-934-21		100H	
C1023	1 104-004-11	COMMITTEE CHILE		20.00, 201	D0101	R-719-921-RR	DIODE MTZJ-13B						1,2007		LEAD, JUMPER		
67626	1 164 204 11	GENANTO COTA	מתו ו	10.00% 25V	D0101		DIODE RD5, 6ESB2		05804		DIODE RD5.6ESB2		1,2008	1-216-295-91		9	
C7030		CERAMIC CHIP		10.00% 25V	D0110		DIODE RD5.6ESB2		05807	3-719-929-15	DIODE HZS9.1NB2		1,2009	1-216-295-91	SHORT CHIP	9	
C7031		CERAMIC CHIP					DIODE HZS9.1NB2		05809	3-719-050-38	DIODE MIMA152WK-71						
C7032		CERAMIC CHIP		10.00% 25V	20111				05911	8-719-081-97	DIODE MADL314T1		1,2010	1-414-928-31	INDUCTOR	108	
57038		CERAMIC CHIP		10.00% 16V	00112	5-119-921-88	DIODE MTZJ-13B		05812	3-719-081-97	DIODE MMDL914T1		12012	1-414-934-21	INDUCTOR	100#	
37039	52-966-il	CERAMIC CHIP	3.302238	10.00° 30V													

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Note: The components identified by shading and marked a are critical for safety. Replace only with the part numbers specified in the parts list.

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REF NO.	PART NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK												
L2014	1-408-602-31		8.2UH	22503		TRANSISTOR MSD601-RST1	TEATH OF	REF.NO.	PARTNO	DESCRIPTIO	)N		REMARK	REF NO.	PART.NO	DESCRIPTION			REMARK
12500		LEAD, JUMPER		22504		TRANSISTOR MSB709-RT1		R0103	1-216-073-91	RES-CHIP	10K	5₹	1/10W	R2056	1-216-037-00	RES-CHIP	330	58	1/10%
L2501		LEAD, JUMPER		Q2304 Q3200		TRANSISTOR MSD601-RST1		R0104	1-216-827-11	METAL CHIP	3.3K	58	1/10W	R2057	1-216-025-11		100		1/10W
13000	1-216-295-91		0	Q3200 Q3201		TRANSISTOR MSD601-RST1		R0105	1-216-025-11	RES-CHIP	100	5%	1/10W	R2058	1-216-025-11		100		1/10W
L3004	1-216-295-91		0	03202		TRANSISTOR MSB709-RT1		R0107	1-216-025-11	RES-CHIP	100	5%	1/10W	R2059	1-216-829-11				1/10W
12004	1-210-293-91	SHURT CHIP	V	Q3202	0-123-010-03	TRANSISTOR MSB/U9-RTI		R1000	1-216-049-11	RES-CHIP	1K		1/10W	R2060	1-216-829-11				1/10W
L3005	1-216-295-91	SHORT CHIP	0	Q3204	8-729-010-05	TRANSISTOR MSB709-RT1													
12006	1-216-295-91	SHORT CHIP	0	Q3300	8-729-010-05	TRANSISTOR MSB709-RT1		R1001	1-216-301-00		10		1/10W	R2061	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
L3007	1-216-295-91	SECRT CHIP	0	23301	3-729-010-05	TRANSISTOR MSB709-RT1		R1002	1-216-321-11		1K		1/10W	R2062	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
L3008	1-216-295-91	SHORT CHIP	0	23302	8-729-010-05	TRANSISTOR MSB709-RT1		R1003	1-216-309-11		100		1/10W	R2063	1-216-829-11	METAL CHIP	4.7K	58	1/10W
13009	1-216-295-91	SHORT CHIP	0	23500	3-729-028-28	TRANSISTOR 2SK2036(TE85L)		R1004	1-216-309-11		100		1/10W	32064	1-249-425-11	CARBON	4.7K	5 }	1/49
								R1005	1-216-049-11	RES-CHIP	1.K	58	1/10₩	32065	1-216-337-11	METAL CHIP	22 <b>x</b>	3	S 538
13010	1-216-295-91	SHORT CHIP	0	23501	3-729-028-28	TRANSISTOR 2SK2036(TEREL)													
13011	1-316-295-91	SECRT CHIP	o e	25100	3-729-010-05	TRANSISTOR MSB709-RT1		R1006	1-215-351-00		1.2K	ŝŧ	1/10W	. 32066	1-216-329-11	METAL CHIP	4.7K	53	1/11#
13012	1-216-295-91	SECRI CHIP	3	25101	3-729-010-29	TRANSISTOR MSD601-RST1		31007	1-412-387-31		4.70E			32067	1-216-829-11	METAL DELP	4. TK	ì	1,100
13200	1-412-706-31	INDUCTOR	100 <b>a</b>	25300	3-729-010-29	TRANSISTOR MSD601-RST1		R1008	1-216-295-91		)			32068	1-216-049-11	RES-CEIP	1.8	*	1 10%
13202	112-006-31	INDUCTOR	100#	25301	3-729-053-33	TRANSISTOR IRF614-037		31309	1-414-530-21		100NB			32069	1-216-837-11	METAL DELP	22 <b>X</b>	Si .	1/100
								R1010	1-216-295-91	SHORT CHIP	J			R2070	1-216-833-11	METAL HEIP	10K	34	1/100
13203	1-412-006-31	INDUCTOR	1908	25302	3-729-140-97	TRANSISTOR 2SB734-34													
L3206	1-412-006-31	INDUCTOR	1008	25303	8-729-010-29	TRANSISTOR MSD601-RST1		R1014	1-216-295-91					, R2071	1-216-839-11	METAL CHIP	33 <b>K</b> 3	18	1/10%
13208	1-412-006-31	INDUCTOR	19UH	Q5304	8-729-010-29	TRANSISTOR MSD601-RST1		R1017	1-216-822-11			58	1/10W	32072	1-216-049-11		1K 3	3	1,110
13300	1-412-006-31	INDUCTOR	10 <b>0H</b>	25305	9-729-119-78	TRANSISTOR 2SC2785-EFE		R1019	1-216-295-91		0			R2073	1-216-049-11	RES-CEIP	1K 5	iŧ :	./ 13W
15300	1-406-989-21	INDUCTOR	10 <b>MH</b>	25306	8-729-140-97	TRANSISTOR 2SB734-34		R1021	1-216-833-11					R2074	1-216-837-11	METAL CHIP	22K 5	÷ :	./10%
								R1022	1-216-839-11	METAL CHIP	33 <b>K</b>	5₹	1/10W	32075	1-216-833-11	METAL CHIP	10 <b>K</b>	iš :	./10W
L5301	1-406-989-21	INDUCTOR	10MR	Q5307	8-729-010-05	TRANSISTOR MSB709-RT1													
15400	1-412-524-11	INDUCTOR	9.2UH	Q5 <b>4</b> 00	8-729-010-29	TRANSISTOR MSD601-RST1		R1023	1-216-849-11				-,	R2076	1-216-839-11	METAL CHIP	33K 5	i	1/10W
15896	1-216-864-11	SHORT CHIP	0	25401	3-729-421-19	TRANSISTOR UN2213		R1024	1-216-839-11		33 <b>K</b>			R2077	1-216-049-11	RES-CHIP	1K 5	8 3	1/10%
15897	1-216-864-11	SHORT CHIP	0	Q5 <b>4</b> 02	8-729-010-05	TRANSISTOR MSB709-RT1		R1025	1-216-337-11		22K			R2078	1-216-025-11	RES-CHIP	100 5	8 :	./10W
15898	1-414-934-21	INDUCTOR	10UH	25403	8-729-421-19	TRANSISTOR UN2213		R1026	1-216-317-11					R2079	1-216-049-11	RES-CHIP	1K 5	÷ :	J10 <b>W</b>
				1				R2009	1-216-817-11	METAL CHIP	470	5%	1/10₩	R2080	1-218-867-11	METAL CHIP	6.8K 0	.5% :	/13 <b>7</b>
15899	1-414-934-21		1008	25404		TRANSISTOR IRF620		20010					4 (4 8	ŀ					
L7001	1-414-934-21		1008	25813	8-729-421-19	TRANSISTOR UN2213		R2010	1-216-817-11		470			R2081	1-216-833-11		10K 5	3	/10W
L7009	1-414-934-21	INDUCTOR	10UH	Q581 <b>4</b>	8-729-010-05	TRANSISTOR MSB709-RT1		R2011	1-216-049-11		1K		-,	R2082	1-216-805-11		47 5	1 2	./10W
L7010	1-414-934-21		10UE	25815	8-729-010-29	TRANSISTOR MSD601-RST1		R2014	1-216-049-11		1K	58	1/10W	R2083	1-216-817-11		470 5	§ 1	/10W
L7011	1-414-934-21	INDUCTOR	1000	25816	8-729-010-05	TRANSISTOR MSB709-RT1		R2015	1-216-295-91					R2084	1-216-837-11		22K 5	8 2	/10W
				1				R2017	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2085	1-216-837-11	METAL CHIP	22 <b>K</b> 5	<b>1</b>	/10W
17012	1-414-934-21	INDUCTOR	10UH	26201		TRANSISTOR 2SB734-34		20010	1 217 205 21	2000 0000									
				27003		TRANSISTOR MSD601-RST1		R2018	1-216-295-91				1/100	R2086	1-216-837-11		22 <b>K</b> 5		/10 <b>W</b>
	< PROTECT	CR MCDULE >		27009		TRANSISTOR MSB709-RT1		R2020	1-216-853-11		470K			R2087	1-216-837-11		22 <b>K</b> 5	ŧ :	/10W
				27011		TRANSISTOR MSB709-RT1		R2023 R2026	1-216-853-11		470K			R2088	1-216-041-00		470 5		
PS2501 A	1-533-597-31	IC LINK	5A (1.15) (1.15) (1.15)	27312	8-729-010-05	TRANSISTOR MSB709-RT1		R2026 R2029	1-216-953-11 1-216-853-11		470K			R2089	1-216-041-00		470 5		
								RZUZY	1-210-000-11	WEINT CHIL	470K	28	1/10₩	R2092	1-216-039-00	RES-CHIP	390 5	ŧ 1	/10W
	< TRANSIS	TOR >		27013		TRANSISTOR MSD601-RST1		R2032	1-216-853-11	WEEK! CUID	470K	53	1/100						
01000	2 722 212 25		7700 201	27014		TRANSISTOR MSB709-RT1		R2035	1-216-853-11		470K		1/10W	R2093	1-216-039-00		390 5		/10W
Q1000		TRANSISTOR MSE		27015		TRANSISTOR MSB709-RT1		R2033	1-216-353-11		470K			R2094	1-216-039-00		390 5		
Q1001		TRANSISTOR MSD		27016		TRANSISTOR MSD601-RST1		R2041	1-216-853-11		470K		1/10W	R2095	1-216-039-00		390 5		
Q1004		TRANSISTOR MSE		27017	8-729-010-05	TRANSISTOR MSB709-RT1		R2042	1-216-829-11					32096	1-216-039-00		390 5		/10W
Q1805		TRANSISTOR UN2							1-210-329-11	METAL COTA	4.:A	35	1/10#	R2097	1-216-039-00	RES-CHIP	390 5	<b>5</b> 1	/10#
Q1006	8- 13-010-02	TRANSISTOR MS3	5/U9-KTI	27018		TRANSISTOR MSB709-RT1		R2043	1-216-829-11	מזמי ומיים	4 77	5.2	1/109						
Q200 <b>0</b>	0_770_010_20	TORNATATION NAME	CO1 DOWN	27019	5-729-010-29	TRANSISTOR MSD601-RST1		R2043	1-216-853-11				-,	R2098	1-216-049-11		1K 5		/10W
-		TRANSISTOR MSD TRANSISTOR MSD			,	• .		R2047	1-216-853-11					R2099	1-216-049-11		1K 5		
Q2001 02002					< RESISTO	K >			1-216-837-11						1-216-073-91				
Q2002 02002		TRANSISTOR MSD		****	1 21/ 20/ 1-			R2050	1-216-845-11					R2501	1-216-341-11				
Q2003		TRANSISTOR MSD				SHORT CHIP 0		NE 0 3 0	2-210-043-11	uerum CHIL	TOUR	18	17 10M	R2502	1-208-810-11	METAL CHIP	15 <b>K</b> 0	.5% 1	/10W
22004	3- 43-510-29	TRANSISTOR MSD	0001-K211	JR123		SHORT CHIP 0		R2051	1-216-049-11	פושיים בכ		52	1/109						
22005	3 753 314 34	TO A MOTOR OF THE	scat name	JR2000	1-216-295-91	SHORT CHIP 0		R2051	1-216-049-11					R2503	1-208-810-11				
	3-709-010-29			20101				R2052 R2053	1-216-337-11			15	1/10#	R2504	1-216-049-11		1K 5		
	3-703-010-29			R0101		METAL CHIP 10K 5% 1			1-216-364-11			- 1	1/1/20	R2507	1-216-837-11				
22502	3-119-010-29	EXAMSISTUR MSD	.col-x5tl	R0152	1-216-627-11	METAL CHIP 3 3% 5: 1	2197	3205 <b>4</b> 32055	1-216-049-11		18			32509	1-249-417-11		18 5		
								24043	1-216-349-11	14371541		. •	-/> <b>#</b>	R2511	1-018-078-91	RES-CHIP	138 5		. 13 <b>X</b>

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BEF NO.	PART NO DES	SCRIPTION		REMARK	REF.NO.	PART.NO	DESCRIPTION			REMARK	REF.NO.	PART.NO	DECORIO	0.11								
R2516	1-216-081-00 RES-C		5%	1/109	R3219	1-216-821-11	מדטר זאייםע	1K 54	• • 1	100			DESCRIPT			REMARK	PEF NO.	PART,NO	DESCRIPTIO	N		REMARK
R2516 R2517	1-216-841-11 METAL		5%		R3220	1-216-837-11		22K 54			R5148		METAL CHIP			1/10W	35345	1-208-832-11	METAL CHIP	120K	0.5%	1/10W
R2518	1-216-049-11 RES-CE		58		R3221	1-216-837-11		22K 5%			R5149		METAL CHIP			1/10W	35346	1-216-849-11	METAL CHIP	220K	5%	1/10W
R2519	1-216-833-11 METAL		5%		R3222	1-216-837-11		22K 5%			R5150	1-249-414-11				1/4W	R5347	1-216-833-11	METAL CHIP	10 <b>K</b>	5%	1/10W
R2520	1-216-035-11 RES-CF			1/10W	R3223	1-216-837-11		22K 5%			R5151	1-249-454-11				1/4W	R5349	1-216-043-91	RES-CHIP	560	5%	1/10W
R2320	1-210-023-11 KB3-C1	AIF 100	30	1,100	, NOLES	1 110 05, 11					R5152	1-249-413-11	CARBON	470	5%	1/4W	R5350	1-216-041-00	RES-CHIP	470	5%	1/10W
R2524	1-216-833-11 NETAL	CHIP 10K	5%	1/10%	R3225	1-216-025-11	RES-CHIP	100 5%	1/	10 <b>W</b>	R5153	1-249-393-11	CARBON	10	58	1/4W	R5351	1 216 200 11				
R2525	1-216-828-11 METAL	CHIP 3.9K	5%	1/10W	R3226	1-216-025-11	RES-CHIP	100 5%			R5154	1-216-833-11				1/10W	R5351	1-216-809-11		100		1/10W
R2912	1-216-295-91 SHORT	CHIP 0			R3229	1-216-025-11	RES-CBIP	100 5%	1/.	10W	25155	1-249-421-11		2.2K		1/4W	R5332 R5400	1-216-821-11				1/10W
R2914	1-216-853-11 METAL	CHIP 470K	5%	1/10W	R3233	1-216-821-11		1K 53			R5156	1-216-833-11				1/10#	35401	1-216-848-11				1/10%
R2321	1-216-295-91 SHORT	CHIP 0			33234	1-216-821-11	METAL CHIP	1K 54	1/3	10 <b>W</b>	R\$157	1-216-829-11	METAL CHIP	4 78		1/10#	35401 35402	1-216-837-11		22K		
															4.	2/ 204	73402	1-216-081-00	KES-CH12	22 <b>K</b>	38	1/10W
32324	1-216-295-91 SBORT				33235	1-216-322-11		1.2K 5%			R5300	1-208-806-11	METAL CHIP	10 <b>K</b>	0.5%	1/10%	35403	1-216-829-11	WEMPT COTTO			
R2927	1-216-295-91 SHORT				33236	1-216-322-11		1 2K 59			25301	1-216-829-11					35404	1-216-629-11		4.73		
32930	1-216-295-91 SHORT				R3237	1-216-797-11		10 5₹			R5332	1-208-806-11					. R5405	1-216-829-11		4. 3		
32933	1-216-295-91 SHORT				33238	1-216-797-11		10 54			R8333	1-208-324-11	METAL CHIP	56K	0.5%	1/109	35407	1-216-854-11		4.78		
R2936	1-216-295-91 SHORT	CHIP 0			33305	1-216-025-11	RES-CHIP	100 5%	1,	19 <b>W</b>	35304	1-208-806-11	METAL CHIP	10K	3.5%	1/10%	35408	1-216-825-11		560K 2.2K		1.119
						. 346 305 44	*** ***	150 1:	• 7	• • • •								1 110 323 11	TELME JAIR	4.48	38	-: -UR
32939	1-216-295-91 SECRT				33306	1-216-025-11		100 58			R5315	1-208-852-11	METAL CHIP	320K	0.5₹	1/10W	35409	1-208-802-11	WETAL CHID	4 av	1 53	1.1109
32342	1-216-295-91 SHORT				R3312	1-216-325-11		2.2K 58			R5306	1-208-802-11	METAL CHIP	5.3K	0.5%	1/19#	R5410	1-208-798-11	WPTAL CHID	4.7K		
R2945	1-216-295-91 SHORT				R3313	1-216-825-11		2.2K 58			R5307	1-216-041-00				1/10W	R5411	1-216-061-91		3.3K		-, -, -, -, -, -, -, -, -, -, -, -, -, -
R3000	1-216-025-11 RES-CF		58		R3314	1-216-825-11		2.2K 5%			R5308	1-216-295-91	SHORT CHIP	0			R5413	1-208-802-11		6.3K		
R3001	1-216-022-00 RES-CH	HIP 75	5%	1/10W	R3318	1-216-025-11	RES-CHIP	100 5%	1/.	10#	R5309	1-208-824-11	METAL CHIP	56K	0.5%	1/10W	R5414	1-249-383-11		1.5		
22000	1 010 000 11 000 00	mrn 100		1/100	R3319	1-216-025-11	pro_curp	100 5%	1/	1/10											,,	2/4#
R3009	1-216-025-11 RES-CE			1/10W 1/10W	R3320	1-216-025-11		100 5%			R5310	1-208-830-11		100 <b>K</b>	0.5%	1/10W	R5415	1-249-389-11	CARBON	4.7	51	1/49
R3010	1-216-022-00 RES-CH			1/10W	R3403	1-216-023-11		1X 53			R5311	1-216-045-00		680			R5416	1-215-888-00				29
R3011	1-216-025-11 RES-CE		5%		R3500	1-216-834-11		12K 5%			R5312	1-208-832-11	METAL CHIP	120K	0.5%	1/10W	35417	1-208-798-11	METAL CHIP	4.78	0.5%	
R3012 R3013	1-216-022-00 RES-CH 1-216-025-11 RES-CH		5%		R3501	1-216-834-11		12K 58			R5314	1-208-840-11		270 <b>K</b>			R5420	1-214-799-21		1.3		
42.13	1-210-020-11 RES-CI	.are 100	38	1/10#	7000	1-210-034-11	ABIAN CHIF	-24 2:	• • •	10#	R5315	1-216-043-91	RES-CHIP	560	58	1/10W	: R5421	1-214-798-21		1.3		
R3014	1-216-022-00 RES-CH	HIP 75	5%	1/10W	R3504	1-216-825-11	METAL CHIP	2.2K 5%	1/:	10W	R5316											
R3015	1-216-022-00 RES-CE		5%	1/10%	R3505	1-216-825-11	METAL CHIP	2.2K 5%	1/:	10 <b>W</b>	R5317	1-216-057-00		2.2K				1-216-049-11	RES-CHIP	1K 5	j§ :	1/10₩
R3016	1-216-025-11 RES-CS		58	1/10W	R3603	1-216-295-91	SHORT CHIP	0				1-216-345-11						1-216-049-11		1K 5	i& ?	1/10W
R3017	1-216-022-00 RES-CE		5%	1/10W	R5102	1-208-814-91	METAL CHIP	22K 0.	5% 1/	10W		1-208-906-11		10K				1-216-089-91		47K 5	is 1	1/10W
R3018	1-216-025-11 RES-CE	BIP 100	5%	1/10W	R5103	1-218-833-11	METAL CHIP	270 0.	5% 1/	10W	R5319	1-208-840-11	METAL CHIP	270K	0.5%	1/10W		1-216-049-11		1K 5	ı\$ 1	1/10W
											83327	1-216-833-11	MATAL CAIP	IUK	55	1/10W	R5808	1-216-049-11	RES-CHIP	1K 5	i 1	1/10W
R3019	1-216-022-00 RES-CE			1/10W	R5107	1-208-814-91		22 <b>K</b> 0.			R5321	1-216-937-11	METAL CHIP	22 <b>x</b>	53	1/100	25200	1 216 222 14				
R3020	1-216-025-11 RES-CE		53		R5111	1-208-814-91		22 <b>K</b> 0.				1-216-820-11		920				1-216-073-91		10K 5		1/10W
R3021	1-216-022-00 RES-CE	HIP 75	53	1/10W	35112	1-218-875-11		15 <b>K</b> 3.				1-208-810-11		158	0 52	1/10#		1-216-841-11		47K 5		1/10W
330 <b>22</b>	1-216-025-11 RES-CE		53		R5118	1-249-411-11		330 54			R5325	1-208-812-11	METAL CHIP	128	0.55 0.53	1/10#	Ł	1-216-817-11		470 5		1/10W
R3023	1-216-022-00 RES-C	HIP 75	38	1/10W	35119	1-216-844-11	METAL CHIP	32K 53	1/:	10₩	R5326	1-216-845-11	METAL CHIP	100K	53	1/10#		1-216-850-11		270K 5		1/10W
				4.440						107						-,	NU012	1-216-073-91	GP-CHIL	10K 5	t 1	1/10W
R3024	1-216-025-11 RES-CR			1/10W	R5122	1-216-821-11		1K 58			R5327	1-216-472-00	METAL OXIDE	39	58	314	R5873	1-216-073-91	PC_/BTD	100 0		11100
R3025	1-216-022-00 RES-CE		5%		*R5125	1-216-836-11		18K 5%				1-216-033-00		220				1-216-825-11		10K 5		1/10W 1/10W
R3026	1-216-022-00 RES-CE		5%		R5126	1-249-406-11		120 5%			R5331	1-216-033-00	RES-CHIP	220		-,	1	1-216-821-11				
R3027	1-216-025-11 RES-CI		5% 5%		R5127 R5128	1-216-025-11		100 5%			R5332	1-208-806-11						1-216-820-11	PTAL-CHID	200 E	5 i, 2 1	L/10W L/10W
R3028	1-216-022-00 RES-CI	H15 12	58	1/10#	K0125	1-216-909-11	METAL CHIP	100 55	1/	104		1-208-320-11					1	1-216-809-11	RMAI CHID	100 5	i 1, 1 1	/10 <b>0</b>
R3029	1-216-045-00 RES-C	הגם מדם	5%	1/10#	R5129	1-216-809-11	WEWAT CHID	100 53	1/	100									carr	100 1	, .,	/10M
R3030	1-216-043-00 RES-CI		5% 5%		R5129	1-216-809-11		100 59				1-208-334-11					R5880	1-216-809-11	ETAL CHIP	100 5	į :	./10W
R3031	1-216-022-00 RES-CI			1/10W	R5131	1-216-821-11		1X 59			R5335	1-208-819-11	METAL CHIP	33 <b>K</b> (	).5 <del>}</del> 1	1/16W		1-216-833-11		10K 58		/10W
R3032	1-216-022-00 RES-CI		5%		R5132	1-216-809-11		100 58				1-216-057-00		2.2K				1-216-833-11 N				/10W
R3032	1-216-025-11 RES-CI		5%		R5133	1-216-809-11		100 58			R5337	1-218-867-11	METAL CHIP					1-216-841-11 M				
10400				-,					1		R5338	1-249-413-11	CARBON	470 5	1	1/4W	R5385	1-216-809-11 N	ETAL CHIP	100 5	t 1.	/10W
R3034	1-216-022-00 RES-C	CHIP 75	5%	1/10W	R5137	1-216-809-11	METAL CHIP	100 58	1/	10W	DE240									-	•,	
R3035	1-216-025-11 RES-C			1/10W	R5138	1-216-809-11		100 58				1-216-057-00		2.2K 5				1-216-809-11 M		100 5%	s 1/	/10₩
R3036	1-216-022-00 RES-C		58		35139	1-216-821-11		1K 59				1-216-089-91		47X 5			R5888	1-216-809-11 M		100 5%		/10W
R3037	1-216-045-00 RES-C			1/10W	35140	1-216-321-11		1K 59				1-208-913-11		33K 0			R5889	1-208-806-11 M	ETAL CHIP	10 <b>k</b> ).	.58 1/	/10W
R3218	1-216-821-11 METAL		58		35146	1-216-025-11		130 59				1-209-909-11		12K 0			35892	1-216-933-11 M	ETAL CHIP	10 <b>K</b> 54	1/	/10 <b>x</b>
											40344	1-008-820-11	MATAL CHIP	193 - 0	.5% 1	1/10%	35395	1-016-833-11 8	ETAL CHIP	10 <b>x</b> 54	: 1/	/109

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REF NO.	PARTINO	DESCRIPT	ON		REMARK	REF.NO.	PART.NO	DESCRIPT	ON		REMARK
R5898	1-216-832-1	1 METAL CHIE	8.2	2K 5%	1/10W	X3200	1-781-946-2	1 VIBRATOR,	CDVCTAT		
R5899	1-216-863-1	1 METAL CHIP	3.3	M 58	1/10W	X5800		1 VIBRATOR,			
R6200	1-218-831-13	METAL CHIP	220	0.5	% 1/10W			· FLEWION,	CHAMILE		
R6201	1-218-839-11	METAL CHIP	470	0.5	% 1/10W	A Bo	ard, Variant P	arts (KV-28	EQ70B)		
R6202	1-249-395-11	CARBON	15	5%	1/4W	-			· 4705)		
					-•		< Tuner	>			
R7007	1-216-049-11	RES-CEIP	1K	5%	1/10W						
R7018	1-216-025-11	RES-CHIP	100	5%	1/10₩	TU1000	8-598-535-20	FRONTEND B	PF-FF411		
R7023	1-216-834-11	METAL CHIP	12K	5%	1/10W				51111		
R7034	1-216-025-11	RES-CHIP	100	5%	1/10₩	A Boa	rd, Variant Pa	rts (KV-28F	(070F)		
R7035	1-216-025-11	RES-CHIP	100	5%	1/10#	1			Q. U.L.)	L	
					4, 44.	İ	< TUNER	>			
RT048	1-216-025-11	RES-CHIP	100	5%	1/10W	į					
R7050	1-216-833-11	METAL CHIP	10K	58	1/10%	101000	3-598-533-10	FRONTEND 3	P_2011		
R7051	1-216-025-11		100	5%	1/10W		* **** 303 13	-100112000	11-56411		
R7052	1-216-025-11		100	53	1/10W	A Boa	rd, Variant Pa	rts (KV-28F	CZOLIN		
K7053	1-216-049-11	RES-CEIP	1K	53	1/13W				e/		
			2.11	33	1/108		< TUNER	>			
R705 <b>4</b>	1-216-847-11	METAL CHIP	: 50 <b>x</b>	. 5 <del>}</del>	1/10%		. 201141				
7056	1-218-867-11			0.5%		TU1000	8-598-529-10	FRONTEND BT	F-20611		
7057	1-216-842-11		56K	. 5.35	1/10W		. 350 325 10	THOM I MAD DI	1-20011		
7058	1-216-049-11		1 K	5%		* A-13	02-133-A C	Board Com	nlete		
7065	1-216-821-11		1K	5₹	1/10W 1/10W				piete	L	
	1 110 021 11	MELAN CALL	10	38	1/10#	-	4-382-854-01	SCREW (M3X8	י עם פין	14	
7066	1-216-809-11	מדמי משתו	100	5%	1/10₩		. 332 031 01	SCHOOL (NOVO	/; F, 3# (	r)	
7068	1-218-877-11		100 18K				< CAPACI	700 \			
7070	1-216-817-11		470		1/10₩		Chinci	- VA /			
7071	1-216-817-11	METAL CHIP	470	5%	1/10#	C7303	1-162-909-11	CERAMIC CHI	100	0.259	
7072	1-216-817-11			5%	1/10W	C7304	1-107-967-11	ELECT			
1012	1-210-01/-11	METAL CHIP	470	5%	1/10W	C7305	1-136-207-11		107		\$ 400V
7073	1-216-041-00					C7306	1-115-416-11		0.0470F		630V
7074			470	5%	1/10W	C7308	1-162-909-11	CERAMIC CHI		5.00%	
7075	1-216-043-91		560	58	1/10W	C/300	1-102-909-11	CERAMIC CHI	428	0.2521	F 50V
7076	1-216-817-11		470	5%	1/10W	C7309	1 104 150 11				
1077	1-216-041-00	RES-CHIP	470	5₹	1/10W	C7310	1-164-156-11 1-162-923-11				25V
1011	1-216-043-91	RES-CHIP	560	5%	1/10W	C7325		CERAMIC CHIE		5.00%	
7078						C7325	1-162-909-11	CERAMIC CHIE		0.25PE	
1078 1079	1-216-817-11		470	58	1/10W	C7328	1-115-416-11 1-107-967-11	CERAMIC CHIE		5.00%	
	1-216-041-00	RES-CHIP	470	5₹	1/10W	C/329	1-101-961-11	ELECT	19F	20.00%	400V
080	1-216-043-91	RES-CHIP	560	53	1/10 <b>W</b>	C7330	1 125 225 44				
081	1-216-917-11	METAL CHIP	470	5%	1/10W	C7330	1-136-207-11		0.047UF	5.00%	
382	1-208-782-11	METAL CHIP	1 <b>K</b>	0.5%	1/10W		1-162-909-11			0.25PF	30V
						C7333	1-164-156-11	CERAMIC CHIP			25V
088	1-208-783-11		1.1K	0.5%	1/10W	C7334	1-162-923-11	CERAMIC CHIP	47PF	5.00%	50V
089	1-216-819-11		680	5₹	1/10W	C7350	1-128-551-11	ELECT	220F	20.00%	63V
090		METAL CHIP	680	5₹	1/10W						
091		METAL CHIP	680	5≹	1/10W	C7351	1-162-909-11	CERAMIC CHIP		0.25PF	50V
092	1-216-295-91	SHORT CHIP	0			C7352	1-115-416-11	CERAMIC CHIP	0.001UF	5.00%	25V
						C7354	1-126-947-11	ELECT	470F	20.00%	35V
	1-216-295-91	SHORT CHIP	0			C7355	1-107-967-11	SLECT	10F	20.00%	400V
94	1-216-295-91	SHORT CHIP	0			C7356	1-136-207-11	MYLAR	0.047UF	5.00%	
095	1-216-295-91	SECRT CHIP	0								
96	1-216-803-11	METAL CHIP	33	5%	1/10W	C7358	1-162-909-11	CERAMIC CHIP	4PF	0.25PF	50 <b>V</b>
97	1-216-803-11	METAL CHIP			1/10W	C7359	1-164-156-11	CERAMIC CHIP	0.1UF		25V
					-, ->=	C7360	1-162-923-11	CERAMIC CHIP		5.00%	
198	1-216-803-11	METAT, CRIP	33	51	1/10%	C7378	1-162-116-00	CERAMIC	680PF	10.00%	
. •		- MILE	دد	20	1/ 108	C7379	1-115-350-51	CERAMIC	0.0047UF		
	< CRYSTAL	`				1			5.00475E		2KV
	/ chibiha	•				1 07380	1-107-562-11	ELECT	220F	20.00%	35.00

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Note: The components identified by shading and marked 3 are critical for safety. Replace only with the part numbers specified in the parts list.

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REF.NO.	PART.NO	DESCRIPTION			REMARK	REF.NO.	PART.NO	DESCRIPTION	<u> </u>		REMARK
27385	1-162-913-11	CERAMIC CHIP	3PF	0.5	10PF 50V	R7325	1-249-417-11	CARBON	1K	58	1/4₩
27387	1-162-911-11	CERAMIC CHIP	6PF	0.5	OPF 50V	R7328	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
7388	1-162-913-11	CERAMIC CHIP	8PF	0.5	0PF 50V	R7329	1-260-095-11	CARBON	470	5%	1/2₩
27390	1-162-911-11	CERAMIC CHIP	6PF	0.5	OPF 50V	R7330	1-215-903-11	METAL OXIDE	68 <b>K</b>	51	2W
27391	1-162-913-11	CERAMIC CHIP	8PF	0.5	0PF 50V	R7334	1-216-819-11	METAL CHIP	680	5%	1/10W
	< CONNECT	OR >				R7335	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
						R7350	1-249-417-11	CARBON	1K	5%	1/4W
CN7300 *	1-564-508-11	PLUG, CONNECTO	OR SP			R7356	1-216-824-11	METAL CHIP	1.3K	5%	1/10₩
		PLUG, CONNECTY				R7357	1-260-095-11		470	5%	1/2W
ON7311		TAB (CONTACT)				R7358		METAL OXIDE	68K	51	2 <b>W</b>
	1-695-915-11										
						R7363	1-216-819-11		580	53	1/10W
	< DICDE >					R7364	1-216-824-11	METAL CHIP	1.8X	5%	1/10W
						37373	1-216-822-11	METAL CHIP	1.5K	58	1/10W
7300	3-719-911-19	DIODE 188119-	25			37374	1-216-819-11	METAL CHIP	580	ŝŧ.	1/10W
27325	3-719-911-19	DIGDE 188119-	25			R7375	1-216-839-11	METAL DEIP	33K	53	1/10%
27350	8-719-911-19	DIODE 188119-	25								
07375	8-719-991-33	DIODE 1881337	- 77			R7376	1-216-833-11	METAL CHIP	10 <b>K</b>	5€	1/10₩
07376	8-719-991-33	DIODE 188133F	-77			R7377	1-216-834-11	METAL CHIP	12 <b>K</b>	53	1/19W
						R7379	1-216-833-11	METAL CHIP	10K	5%	1/10W
27378	8-719-109-89	DIODE RD5.6ESI	B2			R7380	1-216-833-11	METAL CHIP	10K	5≹	1/10W
07379		DICDE RD5.6ES				R7381	1-216-833-11	METAL CHIP	10 <b>K</b>	5%	1/10W
	< IC >					R7382	1-202-549-00	SOLID	100	20€	1/2W
	1 20 /					R7383	1-216-349-00		1	58	19
IC7300	8-759-360-83	IC TDA6111Q/N	4			R7385	1-202-549-00		100	20%	1/2₩
		IC TDA61110/N				R7387	1-247-735-11		47	53	1/2W
		IC TDA6111Q/N				R7389	1-247-881-00		120K	5%	1/4W
	< SOCKET	>				R7390	1-249-417-11	CARBON	18	5%	1/4₩
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					R7391	1-216-824-11		1.8K	5%	1/10W
17376 A	1-451-544-11	SOCKET, CRIT	<b>经过货</b>	7572		R7392	1-216-819-11		680	5%	1/10W
THE LEADING	artaren erra	GLES TABLES OF COLOR	artin Calind natio	era (District	ggillar (tallag) i al-luoja lugik	R7393	1-216-823-11		1.5K		1/10W
	< COIL >					R7394	1-249-417-11		1K	5%	1/4₩
17375	1-414-928-21	UNDUCTOR	179			R7395	1-216-824-11	METAL CHIP	1.9K	51:	1/10W
	1-532-637-00		1A			87396	1-216-819-11		680		1/10W
17378	1-414-928-21		103		*	R7397	1-216-823-11		1.5K		1/10W
21310	1 414 725 22	INDUCTOR				R7398	1-249-417-11		18	5%	1/4₩
	< TRANSIS	STOR >				R7399	1-216-824-11		1.8K		1/10W
07350	8-729-901-06	TRANSISTOR OT	A144EE				< RESISTO	R VARIABLE >			
07352		TRANSISTOR ON									
07353		TRANSISTOR UN				3V7375	1-241-656-21	RES, ADJ, ME	TAL FIT	M 110	м
•		TRANSISTOR OT				1		1900			••
Q7355		TRANSISTOR UN				* A-130	2-134-A F1	Board, Com	plete		
	< RESISTO	י פר					4-206-220-01	HOLDER TEN			
	/ WEST21/	/a /					* 4-374-846-01		ITOR, 0	ap ty	PE
JR7301	1-216-864-11	SHORT CHIP	3				< CAPACII	mr s			
R7300	1-249-417-11	CARBON	1K 5	5% 1,	/4W		/ CHEMULI	.v /			
R7303	1-216-824-11	METAL CHIP	1.3K 3	5% 1	/10W	C0982	1-104-665-11	ELECT	100UF		20.00% 25V
	1-260-095-11				/2W	C0983	1-102-114-30	CERAMIC	470PF		10.00% 50V
	1-215-903-11				 i	00984	1-102-129-00	CERAMIC	0.010	?	10.00% 50V
						06400	1-113-924-11	CTRACTO	0.0041	שחל	20.00% 250%
R7305 R7309	1-215-824-11	METAL CHIP	33	38 1	/10W	. 00400		JEST PROFILE	3 )54		20.30: 2357
37305	1-215-824-11	METAL CHIP	:: :: ::	3% 1	/19W	. 00400	7241	IBAMILO	3 754		20.30: 2337

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Note: The components identified by shacing and marked \( \Delta\) are critical for safety. Replace only with the part numbers specified in the parts list.

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10. PART.NO DESCRIPTION	REMARK REF.N	O. PART NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK	REF NO.	PART NO	DESCRIPTION		REN
< CONNECTOR >	į	< RESISTS	OR >		09024	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	FB0031	1-414-760-21		OUH	
COMMECTOR					C0025	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V	FB0032	1-414-760-21	FERRITE	OUB	
A CAL FOR ALL MATER COMMITTEENING AD	JR09	1-216-864-11	SHORT CHIP 0		C0026	1-162-962-11	CERAMIC CHIP 470PF	10.00% 50V					
* 1-564-507-11 PLUG, CONNECTOR 4P	and the second and th				C0027		CERAMIC CHIP 470PF	10.00% 50V		< IC >			
A COMMENT STATEMENT TOTAL	JR29				C0028	1-126-934-11		20.00% 16V					
A DESCRIPTION OF THE	JR29	02 1-210-004-11	SECRI CELF U		00020	1-140-554-11	14001	20,000	100001	8-759-699-33	IC M24C16-MN	(6T (A)	
1-695-915-11 TAB (CONTACT)				:	*****	1 161 260 11	CERAMIC CHIP 0.1UF	16V	IC0002		IC SAA5665HL		
	R090		METAL CHIP 6.8K 0.5	15 1/1UW	C0029				100002		IC PST573IMT		
< DIODE >	R090				00030		CERAMIC CHIP 0.10F	16V		3-759-665-11			
	R091				00031		CERAMIC CHIP 0.10F	16V	100004				
3-719-109-89 DIODE RD5.6ESB2	R091	2 1-216-335-11			C0032		CERAMIC CHIP 3.13F	16V	100005	5-702-395-01	IC X6F2008V2	10.81-1	
3-719-082-12 DIODE TLAK5190	R091	3 1-216-327-11	METAL CHIP 3.3K 5%	1/10W	20034	1-115-416-11	CERAMIC CHIP 3.301UF	5.00% 25V					
,, ,									100006		IC M27W201-3		
< FUSE >	3091	4 1-216-323-11	METAL CHIP 1.5K 5%	1/10₩	C9835	1-115-416-11	CERAMIC CHIP 3 301UF	5.00% 25V	100007	3-759-271-36	10 TC7SE04F0		
V 103E /	3230			1,49	C0036	1-115-416-11	CERAMIC CHIP 3.3017F	5.00% 25V	10000B	3-759-392-01	10 PCTSE86FE	- JE85R	
	3290				30037		CERAMIC CHIP 3.3010F	5.00% 25V	. :::01013	3-159-523-81	10 TOT4VEC08	FT EL	
△ 1-576-232-11 FUSE (H.B.C.) 5A/250V	3290				00033		CERAMIC CHIP 0.0010F	5.00% 35V					
△ 1-533-725-11 FUSE HOLDER (F6400)	1				20039		CERAMIC CHIP 3.13F	10.00% 16V		< TRANSI	570R >		
	R290	4 1-249-406-11	CARDON LEV 51	., tff	20039	1-101-050-11	CENTRIC CHIEF F. LUE	20.005 201			/		
< 10 >				1.100			AMBELIA AUTO 1 101-	E 104 050	20002	3_300_#04_13	TRANSISTOR T	m2111	
	R290		METAL CHIP 470K 5%		30042		CERAMIC CHIP 3.3019F	5.00% 25V					
6-600-129-01 IC RPM7140-H5	R291			1/10W	20047	1-115-416-11	CERAMIC CHIP 0.001UF	5.00% 25V	20003		TRANSISTOR O		
	R291								20006		TRANSISTOR M		
< RESISTOR >	R291	8 1-216-821-11	METAL CHIP 1K 5%	1/10W		< CONNECT	TOR >		20067		TRANSISTOR D		
	ļ								20008	3-729-027-44	TRANSISTOR D	TC114TKA-T14	6
1-247-807-31 CARBON 100 5%	1/4W	< SWITCE	>		CN0001	* 1-793-497-11	CONNECTOR, BOARD TO BO	ARD 40P	ř				
	1/24				CN0003	1-817-040-81	PLUG, CONNECTOR 3P		20009	3-729-027-44	TRANSISTOR D	TC114TKA-T14	6
W 1-161-112-00 20010 12	5090	1_692_431_21	SWITCH, TACTILE		3		,		20010	3-729-027-44	TRANSISTOR D	TC114TKA-F14	6
			SWITCH, TACTILE			< DIODE :			20011		TRANSISTOR N		
< SMITCE >	309					C DIODE .	,		20012		TRANSISTOR T		
	\$09		SWITCH, TACTILE						_		TRANSISTOR :		
△ 1-571-433-21 SWITCH, PUSE (AC POWER			SWITCH, TACTILE		D0001		DIODE BAS40-05E6327		Ç0013	529-421-22	IMMSISION .	.02211	
	809	1-692-431-21	SWITCH, TACTILE		D0201		DIODE UDZSTE-175.6B		İ				
< VARISTOR >					D0202		DIODE UDZSTE-175.6B			< RESIST	CR >		
	\$09	5 1-692-431-21	SWITCH, TACTILE		00203	8-719-069-55	DIODE UDZSTE-175.6B						
00 A 1-803-830-11 VARISTOR (EREVIADE21)	**************************************				D0204	8-719-069-55	DIODE UDZSTE-175.6B		R0001		METAL CHIP	680 5%	1/10
	2,000	-1404-964-A M2	Board, Complete						R0002	1-216-824-11	METAL CHIP	1.8K 5%	1/10
1302-135-A H1 Board, Complete					00301	8-719-069-56	DIODE UDZSTE-176.2B		R0303	1-216-809-11	METAL CHIP	100 5%	1/10
1002 100,7		1-540-151-21	SOCKET, IC						R0304	1-216-013-11	METAL CHIP	220 5%	1/109
< CAPACITOR >						< FERRIT	E READ >		30011	1-216-809-11	METAL CHIP	100 5%	1/101
C CAPACITOR >		< CAPACI	TOR >			·	t date /						
	10 000 500	CONTROL			man 2.0.0	. 216 264 11	SHORT CHIP 3		R0014	1-216-237-11	METAL CHIP	22 <b>K</b> 5%	1/10
1-162-964-11 CERAMIC CHIP 0.001UF	10.00% 50V	1 107 306 11	CONSULTS OUTS O 100	10.00% 16V	FB0003				R0014		METAL CHIP	100 5%	1/10
1-126-960-11 ELECT 1DF	20.00% 50V C00		CERAMIC CHIP 0.10F	10.00% 16V	FB0004	1-216-864-11						68K 5%	1/10
1-126-960-11 ELECT 1UF	20.00% 50V C00		CERAMIC CHIP 0.1UF		FB0005	1-216-295-91			R0017		METAL CHIP		-,
1-162-964-11 CERAMIC CHIP 0.001UF	10.00% 50V C00		CERAMIC CHIP 0.1UF	16V	FB0006	1-412-006-31			R0018		METAL CHIP	100 5%	1/10
	C00			20.00% 16V	FB0007	1-412-006-31	INDUCTOR 10UH		R0019	1-216-833-11	METAL CHIP	10K 53	1/10
< CONNECTOR >	C00	07 1-107-826-11	CERAMIC CHIP 0.1UF	10.00% 16V					!				
					FB0008	1-216-295-91	SHORT CHIP 0		RC020	1-216-821-11	METAL CHIP	1K 5%	1/10
0 1-779-947-11 TERMINAL BLOCK, S	000	08 1-107-826-11	CERAMIC CHIP 0.10F	10.00% 16V	FB0009	1-412-006-31			R0022	1-216-809-11	METAL CHIP	100 5%	1/10
9 * 1-564-512-11 PLUG, CONNECTOR 9P	coo		CERAMIC CHIP 0.22UF	16V	FB0010	1-216-295-91			R0023		METAL CHIP	100K 5₹	1/10
9 * 1-564-509-11 PLUG, CONNECTOR SP 0 * 1-564-509-11 PLUG, CONNECTOR SP	COC		CERAMIC CHIP 130PF	5.00% 50V	FB0010	1-216-295-91			20027		METAL CHIP	1K 5%	1/10
O - 1-304-303-11 SPG9, COMUSCION DE	coc		CERAMIC CHIP 56PF	5.00% 50V					RC028		METAL CHIP		1/10
	1 -			16V	FB0012	1-412-006-31	INDUCTOR 1998		XUU25		ADIAN CAIR	700 32	2/13
< DIGDE >	COC	13 1-164-550-11	CERAMIC CHIP 0.10F	70A								100 51	. /
					FB0015	1-216-295-91	. SHORT CHIP )		R0029		METAL CHIP		1/10
3-719-923-60 DIODE MTZJ-T-77-9.1A		15 1-135-834-9	CERAMIC CHIP 2.2E+06P		FB0016	1-216-295-91	SHORT CHIP 3		R0030	1-216-809-11	METAL CHIP	100 5%	1/10
	co	1-165-128-1	CERAMIC CHIP 9.22UF	16V	FB0017	1-216-295-91	. SHORT CHIP 3		R0032	1-216-309-11	METAL CHIP	100 5%	1/10
< SOCKET >	co	1-162-924-1	CERAMIC CHIP 56PF	5.00% 50V	FB0018		SHORT CHIP )		R0033	1-216-809-11	METAL CEIP	100 5€	1/10
Coolina -	co		1 CERAMIC CHIP 0.1UF	16V	7B0019		SHORT CHIP		R0034		METAL CHIP		1/10
1 170 304 11 730#			1 CERAMIC CHIP 47PF	5.00% 50V	610003	1-210-004-11	. Sucht chir 3						
1 1-750-264-11 JACK	- 00	-124-363-1	a communicación de la Trans			1 214 244 11	1 3000m curn 3		. 20035	120192367-11	. WETAL CHIP	5.3 <b>X</b> 0.5	¥ 1/10
		021 1-107-326-1	1 CERAMIC DELF 0 DUF	10.00% 16V	FB0020		L SHORT CHIP		. xuusa - 30037		METAL CHIP		1/10
			1 DERAMIC USIR N. 1917	3 JON 25V	FB0021	1-216-364-11			70039		METAL DEP		
					FB0022		1 INDUCTOR 1008						

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REF.NO.	PART.NO	DESCRIPTION			REMARK	REF.NO.	PART.NO	DESCRIPTION		REMARK
	1-216-809-11		100	5%	1/10W	R0118	1-216-813-11	METAL CHIP 2	20 5%	1/10W
R0040		METAL CHIP	2.2K		1/10W	R0119	1-216-813-11	METAL CHIP 2:	20 5%	1/10W
R0041	1-216-825-11	METAL CHIP		0.5%	•	R0120	1-216-813-11	METAL CHIP 2:	20 5%	1/10W
R0042	1-216-803-11	METAL CHIP	33	5%	1/10W	R0121		METAL CEIP 2	20 5%	1/10W
R0043	•	METAL CHIP	100	5%	1/10W	R0122	1-216-813-11	METAL CHIP 2	20 5%	1/10W
R0044	1-216-809-11	METAL CALL	100	30	-,					
20015	1-216-803-11	METAL CRIP	33	5%	1/10W	R0123	1-216-813-11	METAL CHIP 2	20 5%	1/10W
R0045	1-216-803-11	METAL CHIP	33	5%	1/10W	R0301	1-216-833-11	METAL CHIP 1	OK 5₹	1/10W
R0046	1-216-310-11	METAL CHIP	120	58	1/10W	R0302	1-216-333-11	METAL CHIP 1	OK 58	1/10W
R0047	1-216-809-11	METAL CHIP	100	5%	1/10W	20303	1-216-836-11		8K 51	1/10W
R0048 R0049	1-216-333-11	METAL CHIP	10K	58	1/10W	30304	1-218-367-11	METAL CHIP 6	. 3K 🔾	5% 1/10W
70043										
R0050	1-216-810-11	METAL CHIP	120	58	1/10W		< RESISTO	< 91EC 9		
R0051	1-216-835-11	METAL CHIP	15K	58	1/10W					***
R0052	1-216-310-11	METAL CHIP	120	5 हे	1/10W	RB0101	1-233-411-11	RES, CHIP NETWO		
R0053	1-216-809-11	METAL CHIP	100	5%	1/19W	RB0102	1-233-411-11	RES, CHIP NETWO		.3216)
30054	1-216-309-11	METAL CHIP	100	5%	1/10W	RB0103	1-233-411-11	RES. CHIP NETWO		(3216)
						RB0194	1-233-411-11	RES, CHIP NETWO		
R0055	1-216-809-11	METAL CHIP	100	5₺	1/10₩	RB0105	1-233-411-11	RES, CHIP METWO	KK 220	(3216)
30056	1-216-833-11	METAL CHIP	10K	5%	1/10W				202	:004.63
R0057	1-216-809-11	METAL CHIP	100	5%	1/10W	RB0107	1-233-411-11	RES, CHIP NETWO		
R0058	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	RB0108	1-233-411-11	RES, CHIP NETWO	ORK 220	(3219)
R0059	1-215-841-11	METAL CHIP	47K	5%	1/10W					
							< CRYSTAL	· <b>&gt;</b>		
R0060	1-216-833-11	METAL CHIP	10 <b>K</b>	5%	1/10W			TERRESON COVC	na r	
20061	1-216-833-11	METAL CHIP	10K	5%	1/10W	X0001	1-578-774-71	VIBRATOR, CRYS	LAL	
R0062	1-216-933-11	METAL CHIP	10 <b>K</b>	5%	1/10W		0 COZ A VIN	Board, Comp	lote	
R0063	1-216-833-11	METAL CHIP	10 <b>K</b>	5€	1/10W	A-13U	JU-027-A VIV	Board, Comp	//616	
R0064	1-216-833-11	METAL CHIP	10 <b>K</b>	5₹	1/10W	1	4.202-054-01	SCREW (M3X8),	D 96 /-	•1
							4-302-034 01	SOLUM (ILLINO)	., ,	,
R0065	1-216-833-11		10K	5%	1/10W	İ	< CAPACI	10R >		
R0066	1-218-871-11		10K		1/10₩	Ì	· Garage	,		
R0067	1-216-833-11		10K	5%	1/10%	C7401	1-126-935-11	ELECT 4	700F	20.00% 16V
R0068	1-216-833-11		10K	5%	1/10W 1/10W	C7403	1-126-935-11		700 <b>P</b>	20.00% 16V
R0069	1-216-833-11	METAL CHIP	10K	5%	1/10#	C7404	1-115-339-11	CERAMIC CHIP	.107	10.00% 50V
		0775	100	5%	1/10W	C7405	1-126-933-11		00UF	20.00% 16V
R0070	1-215-309-11			5%	1/10W	C7406	1-126-935-11	ELECT	70UF	20.00% 16V
R0071	1-216-309-11		100 100	5%	1/10W					
R0072	1-216-809-11		100	⊃* 5*	1/10W	C7407	1-107-364-11	MYLAR	.01U <b>F</b>	10.30% 20 <b>0V</b>
R9073	1-216-809-11		100	5%	1/10W	C7408	1-107-364-11	MYLAR	).01JP	10.00% 200V
R6074	1-216-309-11	aninh cuit	100	20	-,	C7409	1-107-649-11	RIECT	2.20 <b>F</b>	20.00% 250V
20025	1-216-809-11	METAL CHIP	100	5%	1/10₩	C7410	1-130-471-00	MYLAR	0.00107	5.00% 50V
R0075	1-216-809-1		1K	5%	1/10W	C7411	1-130-471-00	MYLAR	0.00137	5.00% 50V
R0076 R0078	1-216-817-1		470		1/10W					
R0078	1-216-829-1	_	4.7		1/10W	C7412	1-126-935-11		4700F	20,00% 16V
R0079	1-216-864-1		0		•	C7413	1-126-935-11		4700F	20.00% 16V
5,0002			•			C7414	1-107-652-11		1007	20.00% 250V
R0083	1-216-809-1	1 METAL CHIP	100	5%	1/10W	C7415	1-107-363-91		0.00680	
R0084	1-216-809-1	-	100		1/10W	C7418	1-163-021-91	CERAMIC CHIP	3.31 <b>TF</b>	10.00% 50V
R0110		1 METAL CHIP			1/10W	!				
R0111		1 METAL CHIP		5%	1/10W	C7421	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
R0111		1 METAL CHIP		0 5%		į				
1/0112							< CONNE	CTOR >		
80113	1-216-813-1	i METAL CHIE	22	0 5%	1/10W					
30114		1 METAL CHIE		0 5%	1/10₩			1 PLUG, CONNECT		
		1 METAL CHIE		0 5%	1/10W			1 PLUG, COMNEC		
R0115										
R0115 R0116		11 METAL CHI		0 58	1/10W 1/10W	CN7444	• 1-770-723-1	: CONNECTOR B	DAPO CO	3CARD 3P

REF.NO.	PART.NO	DESCRIPTION	١		REMARK	REF.NO.	PART.NO	DESCRIPTION	ł		REMARK
	< DIODE >					R7420	1-249-421-11		2.2K		1/4W
						R7421	1-249-389-11		4.7		1/4₩
D7400	8-719-991-33	DIODE 188133	T-77			R7422	1-249-405-11		100	51	1/4W
D7401	8-719-991-33	DIODE 1SS133	T-77			27423		METAL OXIDE	470	58	3₩
D7402	1-535-303-00	LEAD, JUMPER	(5.0M	M)		R7427	1-216-025-11	RES-CHIP	100	5€	1/10W
07403	8-719-991-33	DIODE 188133	<b>T-</b> 77								
D7404	8-719-991-33	DIODE 1SS133	T-77			RT428	1-216-033-00		220	5%	1/10W
						37429	1-216-033-00		220	58	1/10W
07405	3-719-924-11	DIODE MTZJ-T	-77-22			R7432	1-216-065-91		4.7K		1/10W
37406	8-713-924-11	DIODE MTZJ-T	-17-22			37433	1-249-395-11		15	58	1/4W
						R743 <b>4</b>	1-249-395-11	CARBON	15	58	1/4W
	< FERRITE	BEAD >									
						37435	1-216-031-00		130	58	1/13W
FB7400	1-535-303-00	LZAD, JUMPER	5 . JMI	M)		RT436	1-216-049-11	RES-CHIP	1K	53	1, 10%
FB7401	1-535-303-30	LEAD, JUMPER	5.DM	M)							
	< 2011 >										
17400	1-414-934-21	INDUCTOR	1008			i					
17402	1-414-334-21		10UH								
17403	1-414-934-21		10UH			1					
	< TRANSIS	TOR >				!					
Q7400	8-729-010-29	TRANSISTOR M	SD601-R	ST1							
Q7401		TRANSISTOR M				ŀ					
27402	8-729-010-29										
27403	8-729-119-78	TRANSISTOR 2	SC2785-	HPE							
27404		TRANSISTOR 2			6-R						
•											
Q7405	8-729-026-39	TRANSISTOR 2	sa933as	-QT							
Q7406	8-729-045-05	TRANSISTOR 2	SA2005								
Q7407	8-729-045-04	TRANSISTOR 2	SC5511								
Q7408		TRANSISTOR 2			6-R						
Q7409	8-729-010-29	TRANSISTOR M	ISD601-R	ST1							
	< RESISTO	R >									
R7400	1-216-017-91	RRS-CHID	47	51	1/10W						
R7401	1-216-061-91		3.3K		1/10W						
R7402	1-216-041-00			58	1/10W						
R7403	1-249-393-11		10	5 <del>1</del>	1/4%	i					
R7404	1-249-413-11		470		1/4₩						
			-		•						
R7405	1-216-065-91	RES-CHIP	4.7K	5 हे	1/10W						
R7407	1-249-411-11	CARBON	330	5%	1/4W						
R7409	1-216-029-00	RES-CHIP	150	58	1/10W						
R7410	1-216-017-91	RES-CHIP	47	53	1/10W	1					
R7411	1-216-017-91	RES-CHIP	47	53	1/10W	1					
	1-216-017-91		47	51	1/10W	-					
R7412	1-249-414-11		560		1/4₩						
R7413		CARBON	13K		1/4W						
R7413 R7414	1-249-432-11		100	53	1/2W						
R7413 R7414 R7415	1-249-432-11 1-247-739-11		100								
R7413 R7414	1-249-432-11		4.7	51	1/4%						
R7413 R7414 R7415 R7416	1-249-432-11 1-247-739-11 1-249-389-11	CARBON	4.7		1/4%						
R7413 R7414 R7415 R7416	1-249-432-11 1-247-739-11 1-249-339-11 1-249-432-11	CARBON	4.7 13K	51	1/4W 1/4W						
R7413 R7414 R7415 R7416	1-249-432-11 1-247-739-11 1-249-389-11	CARBON CARBON CARBON	4.7	38 38	1/4%	:					

- 75 -

Note: The components identified by shading and marked a lare-critical for safety. Replace only with the part numbers specified in the parts list.

REF.NO. PART NO DESCRI

REMARK

REFINO PARTINO DESCRIPTION

REMARK

### MISCELLANEOUS

# V. P. (16-46-71. space that units story (tr-stable). V. (15-42-3) and man in-stable story (tr-stable). V. P. (17-42-3) and man in-stable story.

1-424-855-11 COIL, CHOKE 2910H

8-598-535-20 FRONTEND BTF-EF411 (KV-28FQ70B)

3-598-533-10 FRONTEND BTF-EC411 (KV-28FQ70E)

3-598-529-10 FRONTEND 3TF-ZUG11 (KV-28FQ70U) A 1-453-378-21 TRANSFORMER ASSY, FLYBACK (MX-6020//Z214)

1-529-408-11 SPEAKER (4.2X24CM)

1-529-417-11 SPEAKER (9CM)

△ 8-451-521-31 DEFLECTION YOKE (Y28RVC3-L2)

1-413-363-11 COIL, NA ROTATION

△ 8-453-011-11 NECK ASSY, (NA299-M)

A 1-424-886-11 COIL, DEGAUSSING

△ 1-251-946-21 CAP ASSY, HIGH VOLTAGE

A 8-735-099-05 PICTURE TUBE (W66LLX060X)

1-452-094-00 MAGNET, ROTATABLE DISK: 15MM

1-452-032-00 MAGNET, DISK; 10MM

### ACCESSORIES AND PACKAGING MATERIALS

\*4-029-168-01 BAG, PROTECTION

\*4-093-767-01 INDIVIDUAL CARTON

\*4-393-768-01 CUSHION UPPER

\*4-093-769-01 CUSEION LOWER

4-093-901-41 MANUAL, INSTRUCTION (KV-28FQ70B)

(GERMAN/ITALIAN/FRENCH/DUTCH)

4-093-901-51 MANUAL, INSTRUCTION (KV-28FQ70B) (ENGLISH)

4-093-901-11 MANUAL, INSTRUCTION (KV-28FQ70E)

(GERMAN/TURKISH/GREEK)

4-093-901-21 MANUAL, INSTRUCTION (KV-28FQ70E) (ITALIAN)

4-093-901-31 MANUAL, INSTRUCTION (KV-28FQ70E)

(NORWEGIAN/PORTUGUESE/SWEDISH/FINNISH/

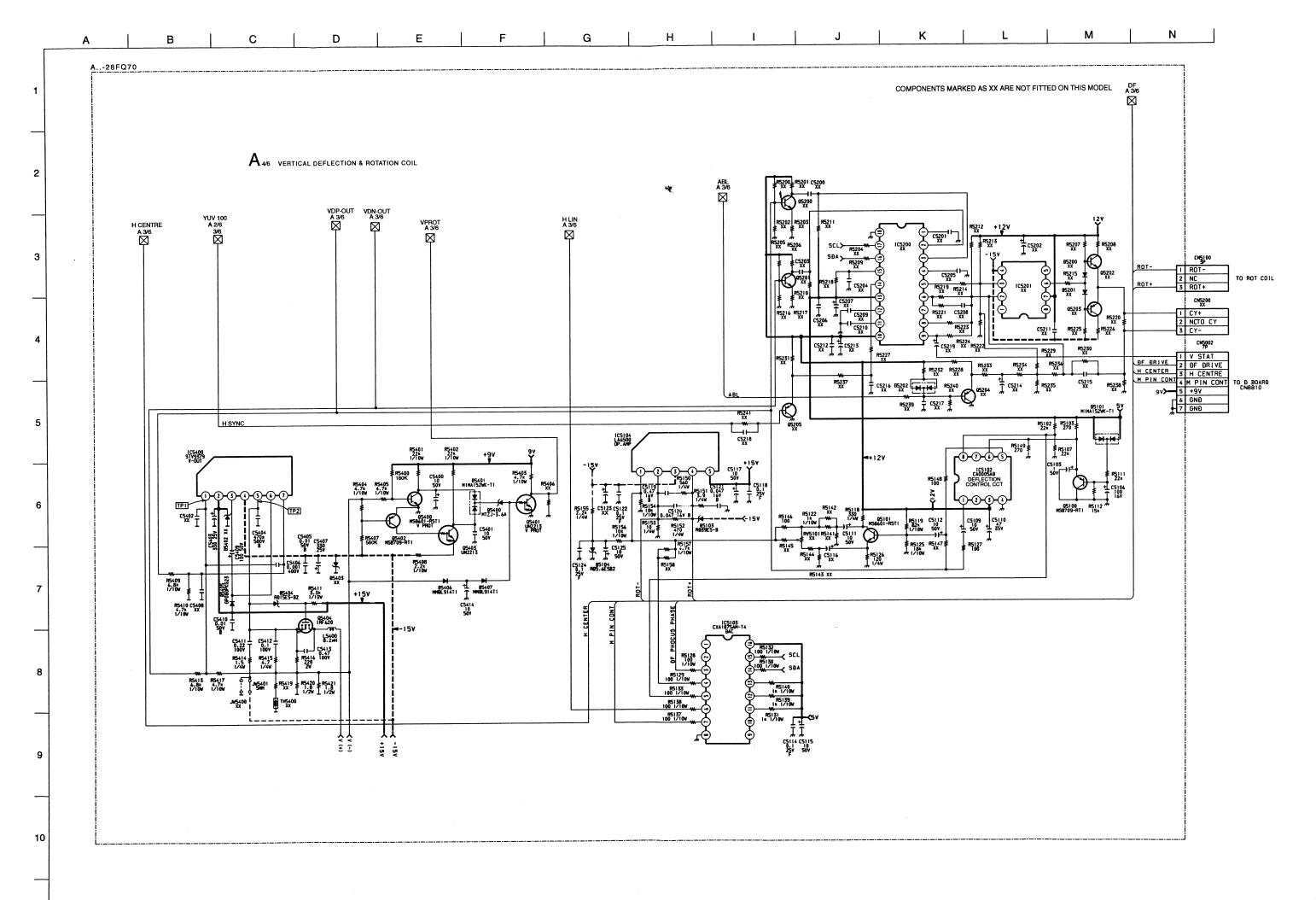
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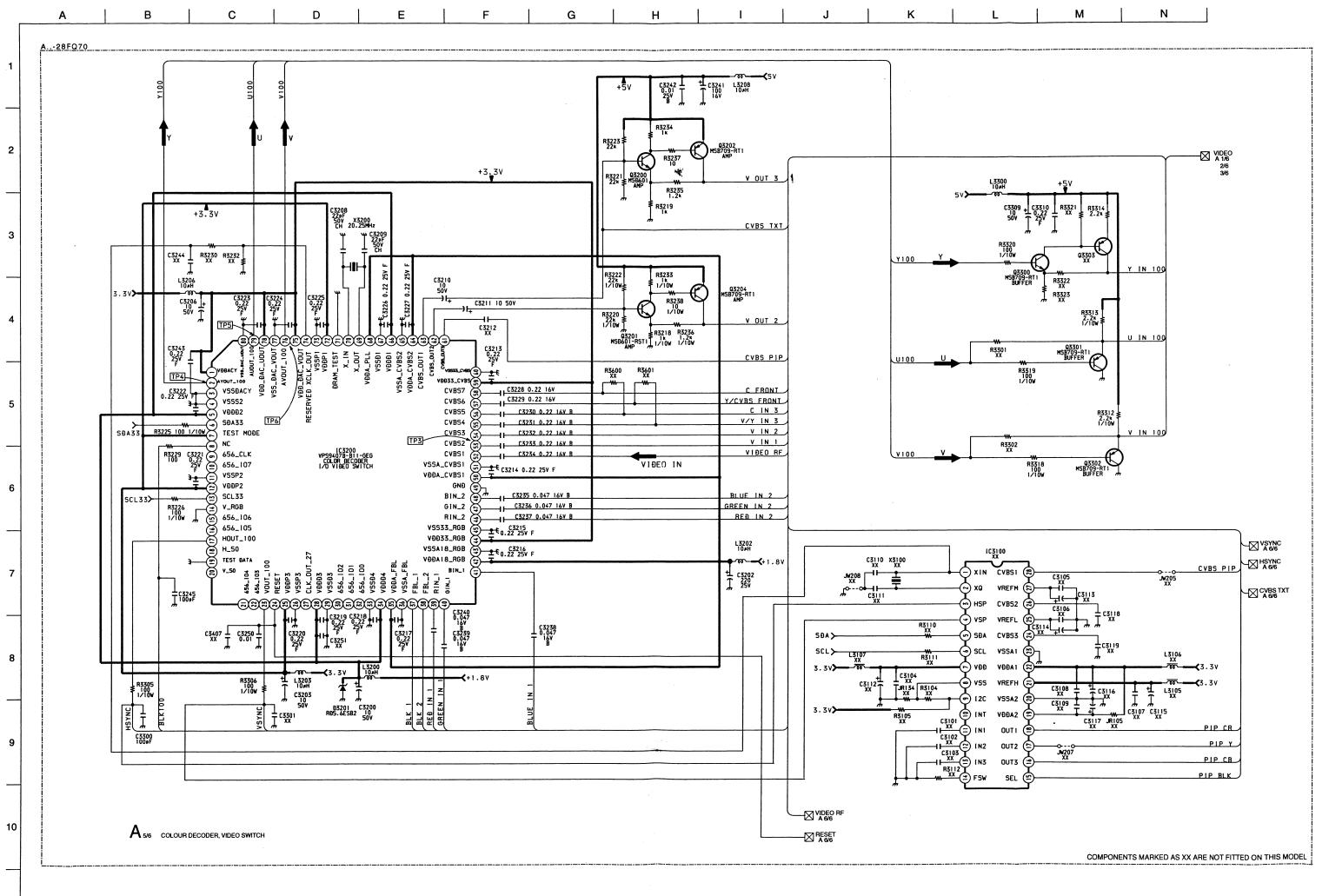
4-093-901-61 MANUAL, INSTRUCTION (KV-28FQ70U) (ENGLISH)

### REMOTE COMMANDER

1-477-259-13 REMOTE COMMANDER (RM-938)

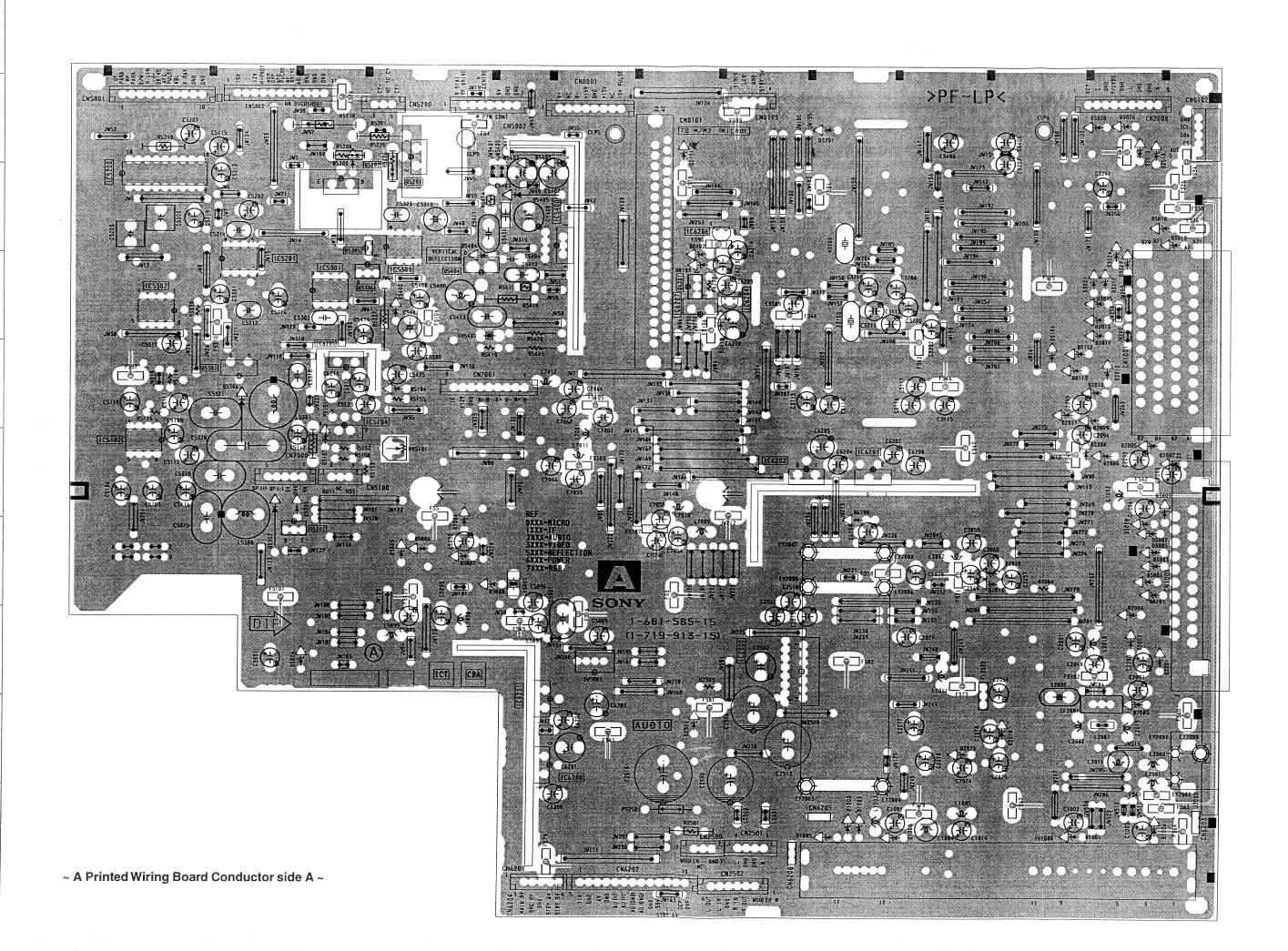
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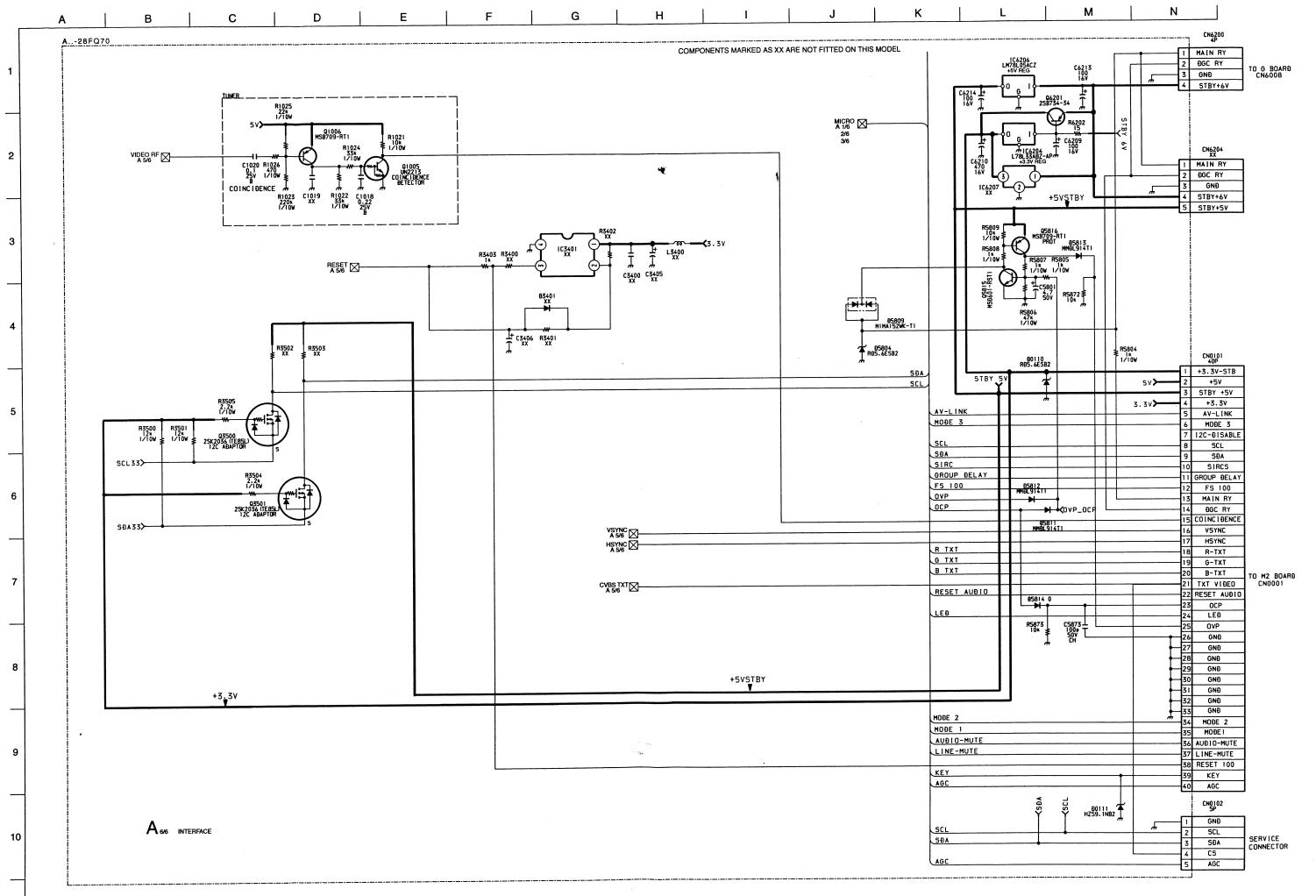
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A B C D E F G H I I J I K I L I M I N

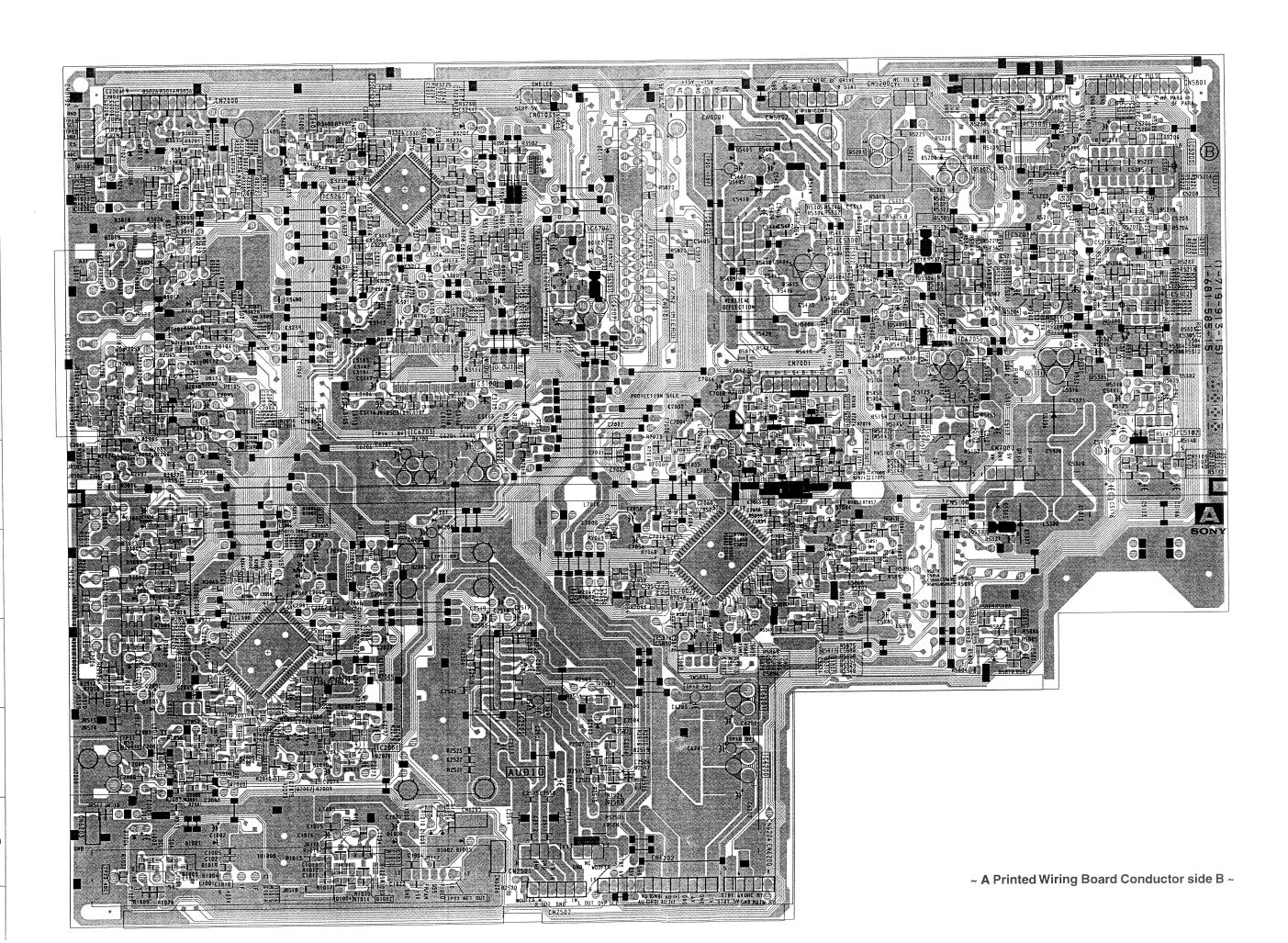


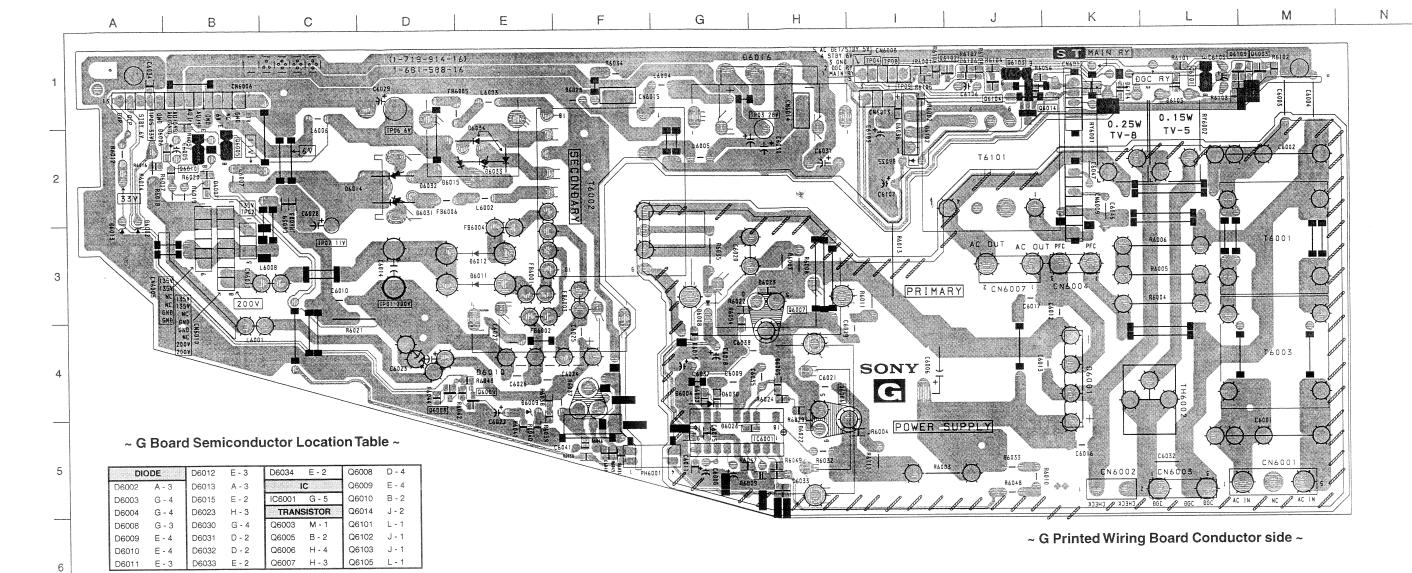
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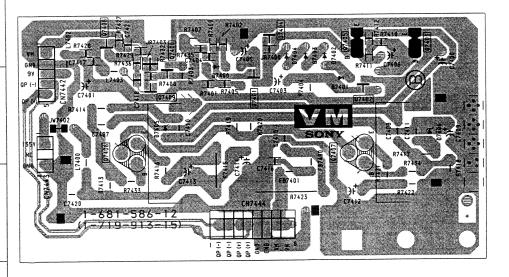
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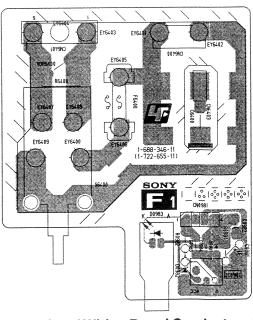
A | B | C | D | E | F | G | H | I | J | K | L | M | N



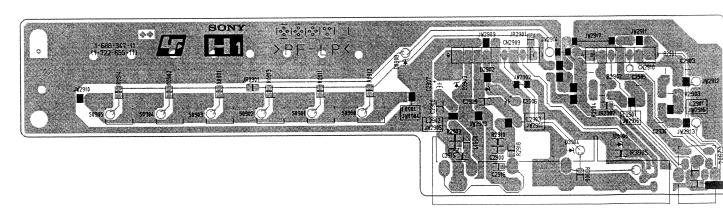




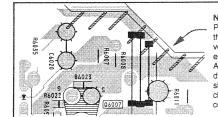
~ VM Printed Wiring Board Conductor side ~



~ F1 Printed Wiring Board Conductor side ~

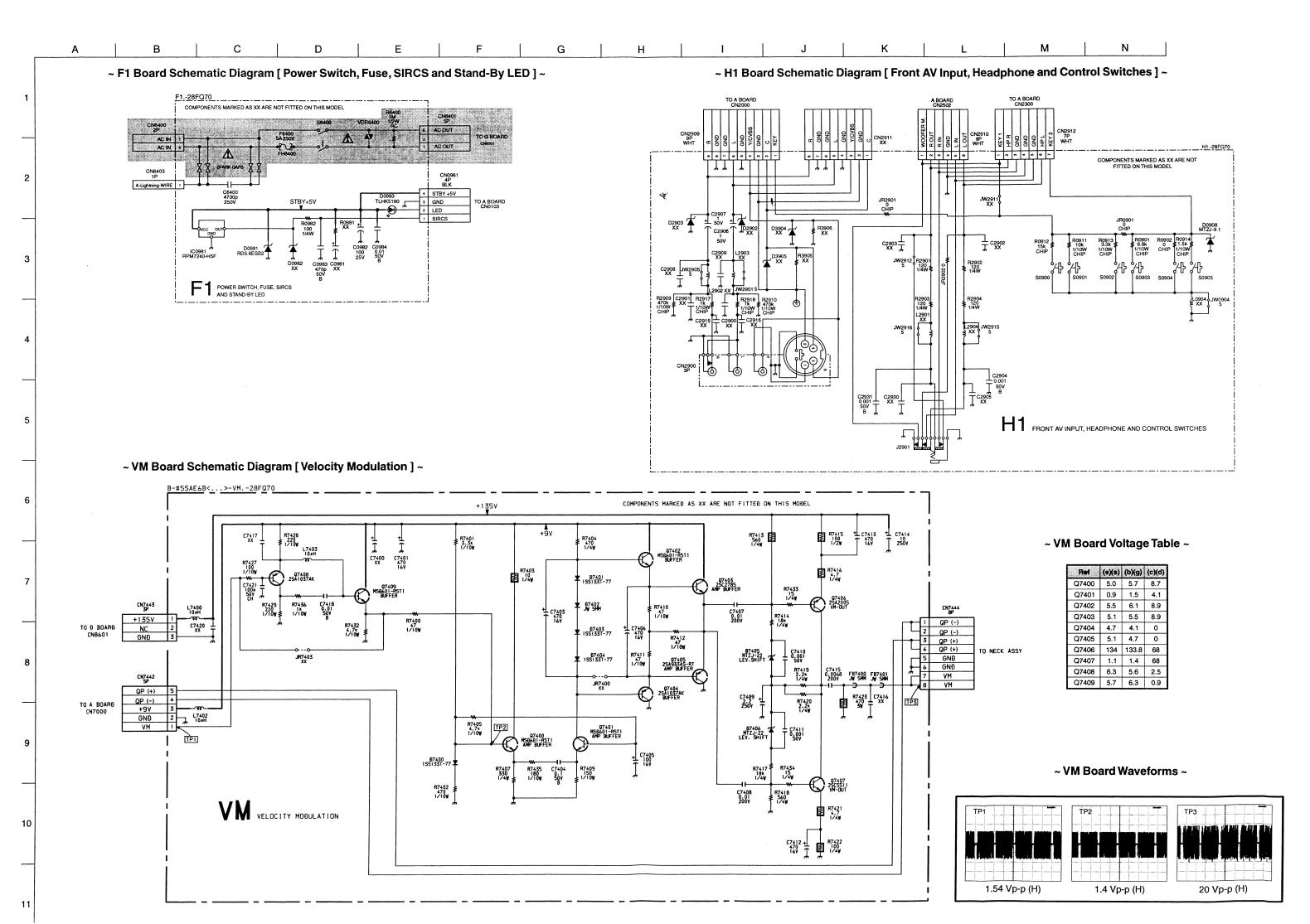


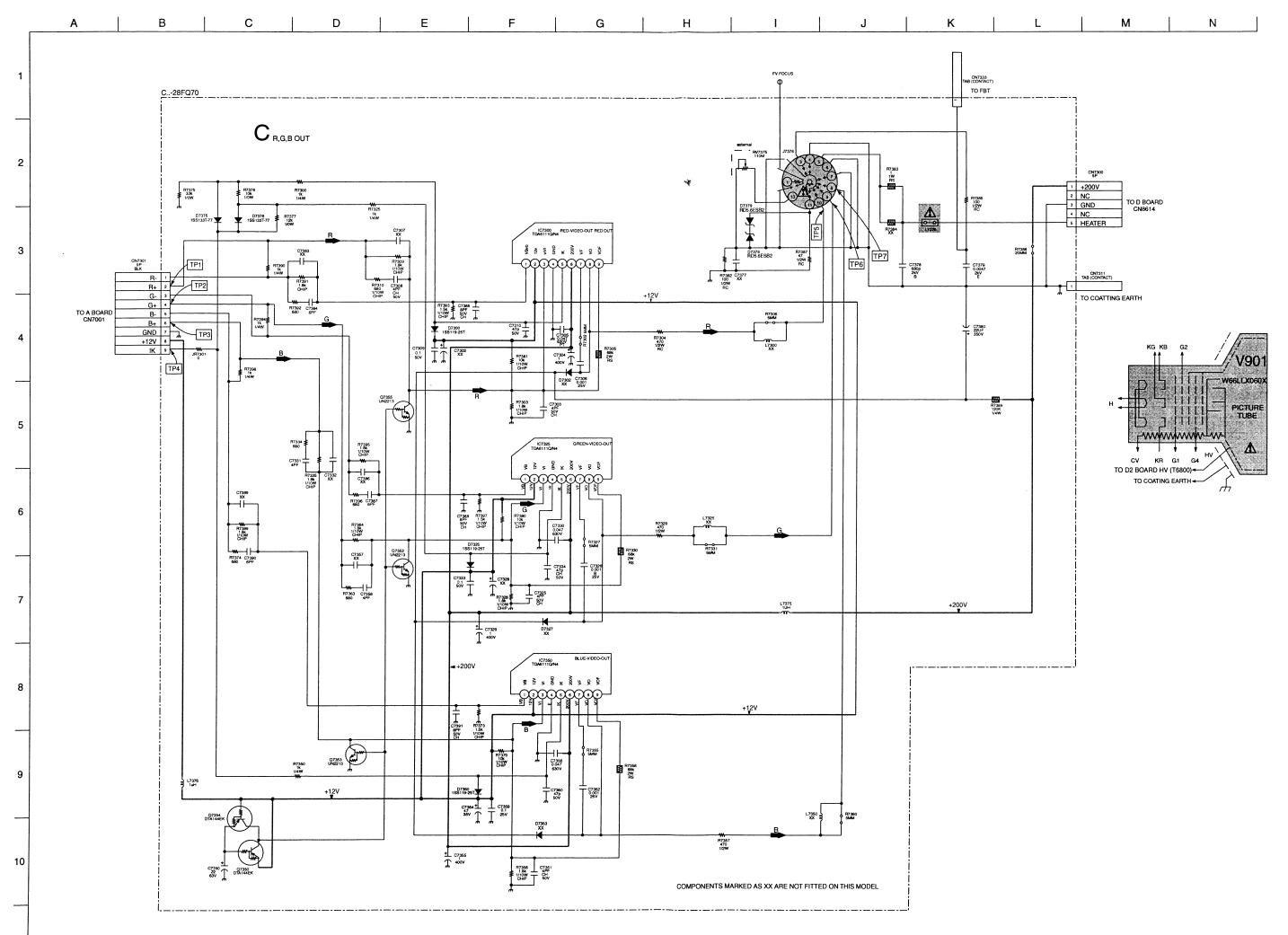
~ H1 Printed Wiring Board Conductor side ~

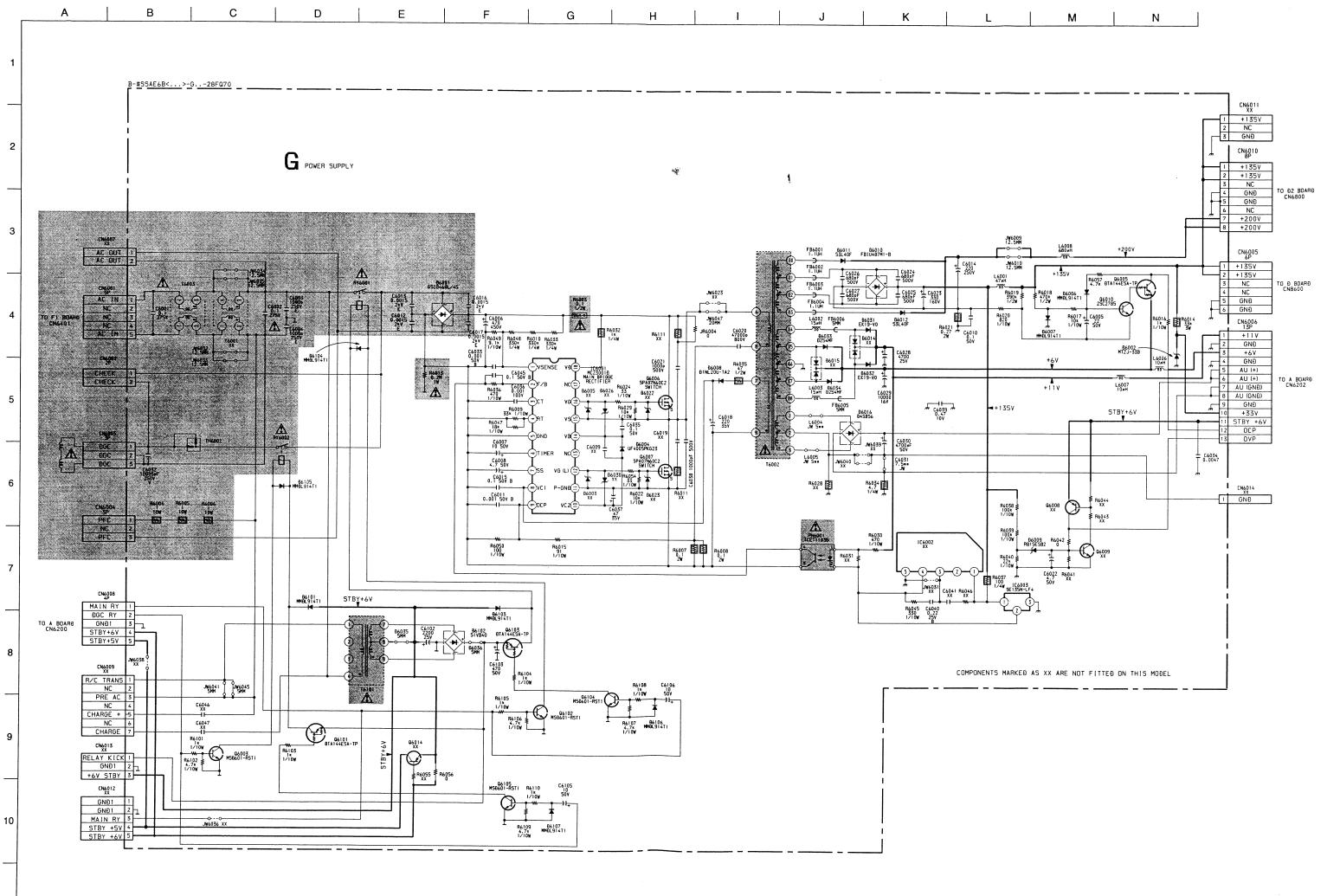


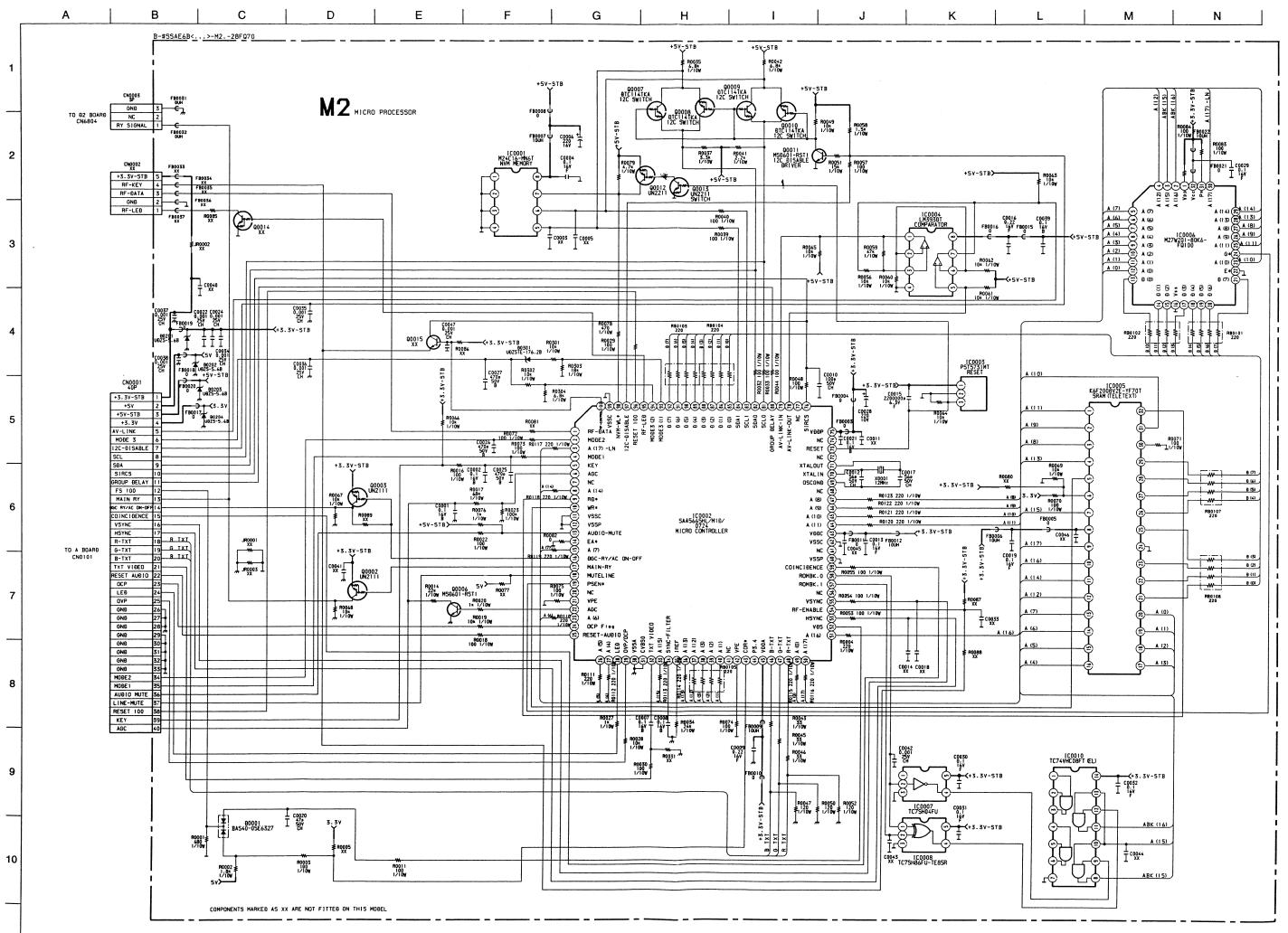
Note:

Portions of the circuit contained within the marked areas as shown have high voltages present. Use care to prevent electric shock during inspection or repair. An Isolation Transformer must be used during any Service work to avoid possible shock hazard due to live chassis. The chassis of this receiver is directly connected to the power line.

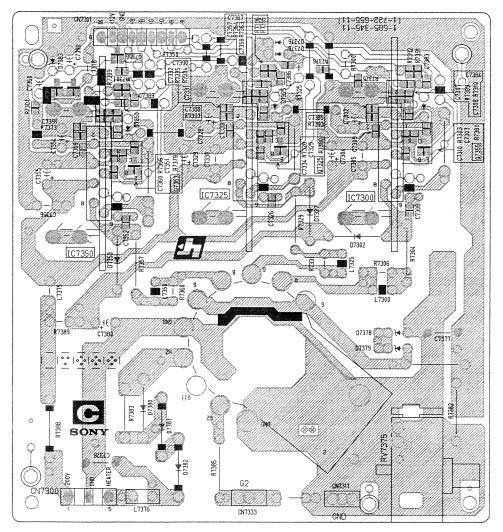




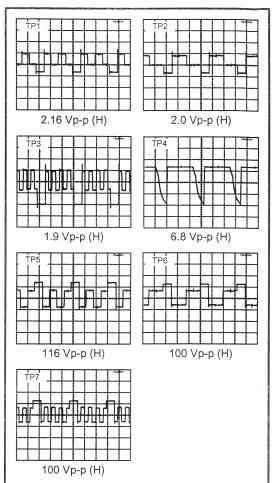




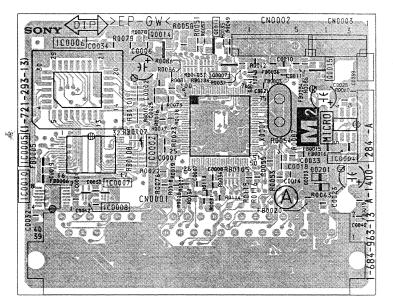
~ C Printed Wiring Board Conductor side ~



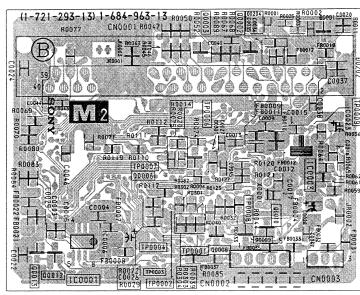
~ C Board Waveforms ~



~ M2 Printed Wiring Board Conductor side A ~



~ M2 Printed Wiring Board Conductor side B ~



~ D2 Printed Wiring Board Conductor side ~

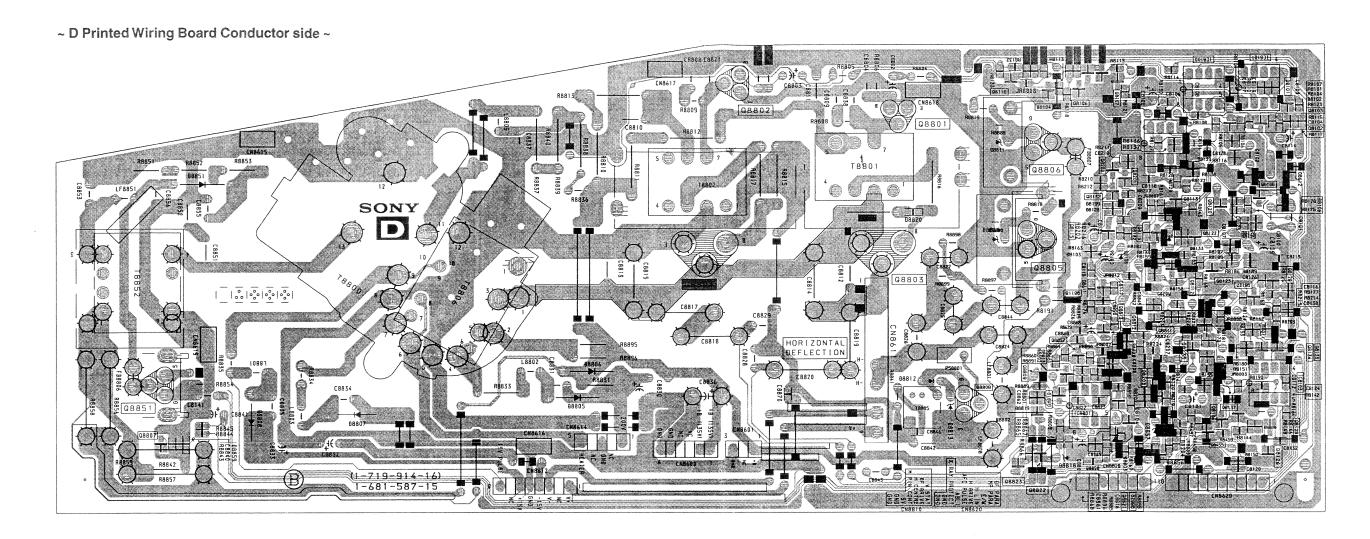
~ C Board Semiconductor Voltage Table ~

Ref	(e)	(b)	(c)
Q7350	12	11.98	0
Q7352	0	0	3.8
Q7353	0	0	3.8
Q7354	11.98	12	0
Q7355	0	0	3.8

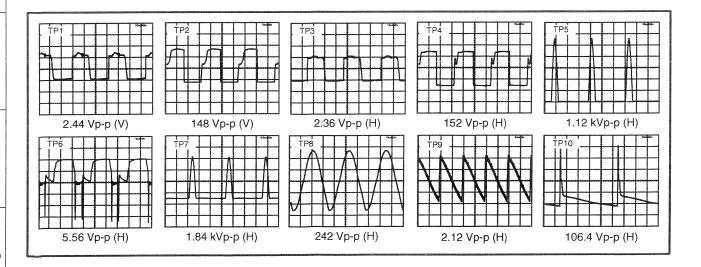
~ C Board IC Voltage Table ~

IC Voltage Table					
Ref No	Pin No	Voltage (V)			
	1	3.9			
	3	3.8			
	5	7.5			
IC7300	6	200			
	7	140			
	8	153			
	9	140			
	1	3.9			
	3	3.8			
	5	7.7			
IC7325	6	200			
	7	140			
	8	153			
	9	140			
	1	3.9			
	3	3.8			
	5	7.5			
IC7350	6	200			
	7	139			
	8	148			
	9	138			

 $\mathsf{A} \mid \mathsf{B} \mid \mathsf{C} \mid \mathsf{D} \mid \mathsf{E} \mid \mathsf{F} \mid \mathsf{G} \mid \mathsf{H} \mid \mathsf{I} \mid \mathsf{J} \mid \mathsf{K} \mid \mathsf{L} \mid \mathsf{M} \mid \mathsf{N}$ 



# ~ D Board Waveforms ~

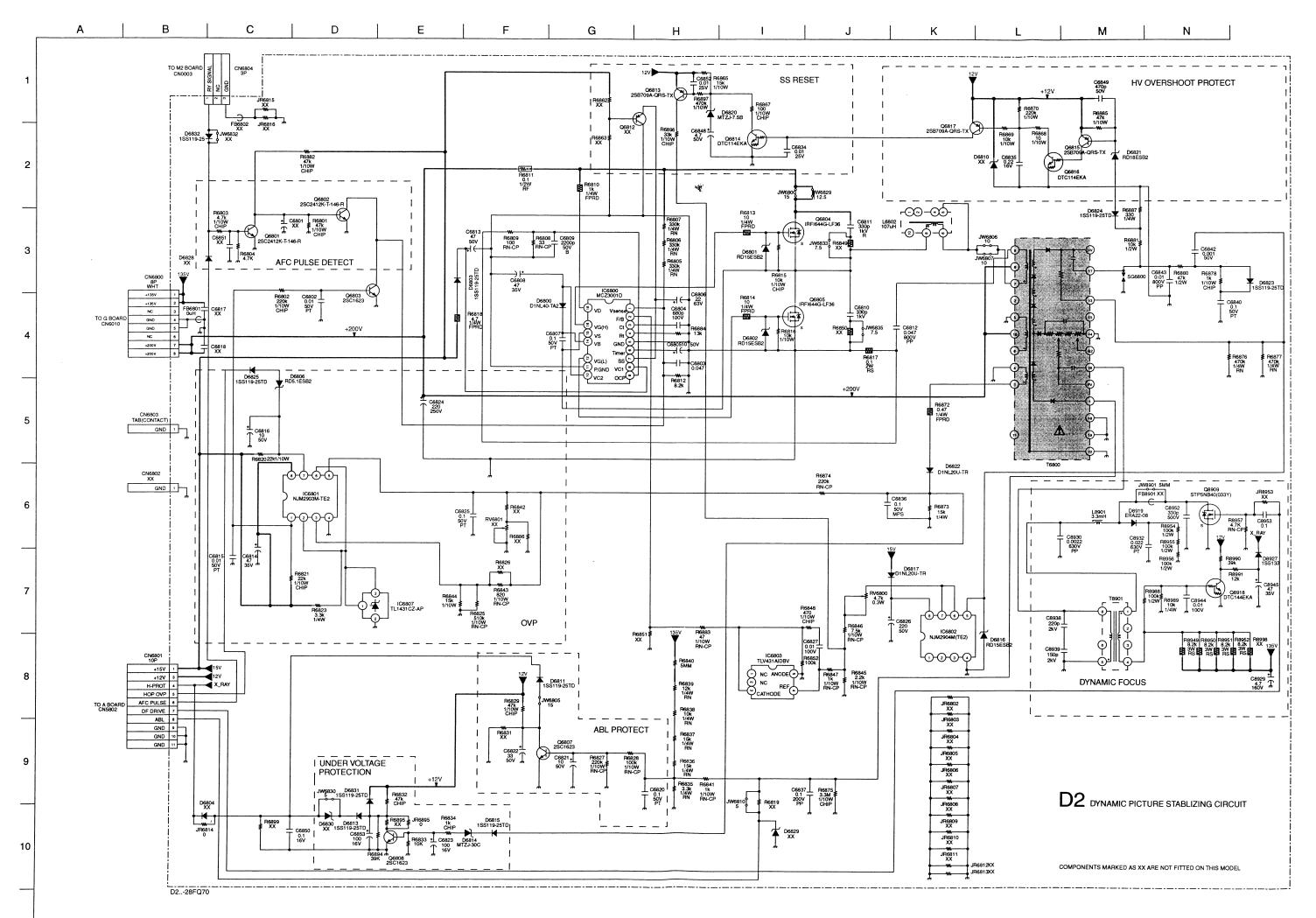


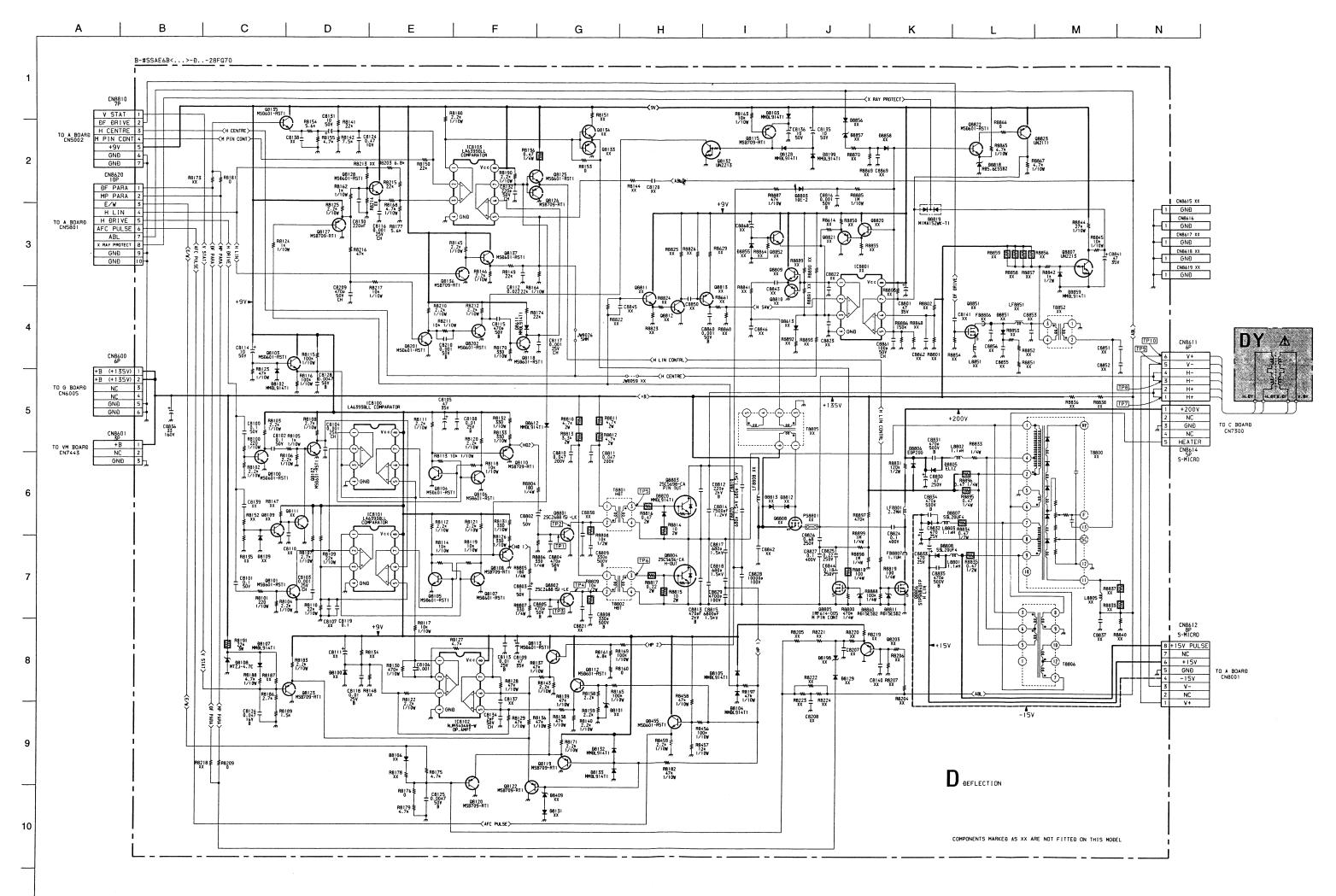
# ~ D Board IC Voltage Table ~

Ref No	Pin No	Voltage (V)		
	1	0.3		
	2	4.3		
IC8100	3	4.1		
108100	5	4.1		
	6	3.0		
	7	0.4		
	1	0.3		
	2	4.3		
IC8101	3	4.4		
100101	5	4.4		
	6	3.0		
	7	0.4		
	1	4.1		
	2	0.4		
IC8102	3	0.4		
100102	5	0.4		
	6	0.4		
	7	0.4		
	1	2.5		
	2	2.1		
IC8103	3	1.7		
100103	5	1.6		
	6	1.0		
	7	1.1		

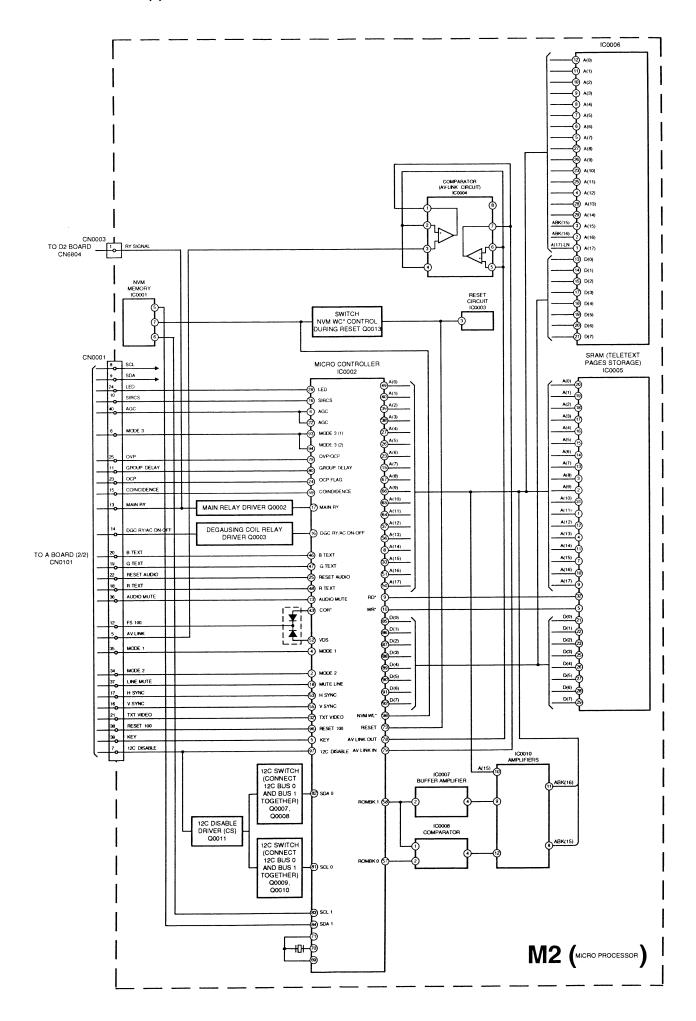
# ~ D Board Semiconductor Voltage Table ~

Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)	Ref	(e)(s)	(b)(g)	(c)(d)
Q8100	0	0.6	3.6	Q8110	2.4	3.1	0	Q8128	3.4	1.5	8.9	Q8801	0	0.4	64.7
Q8101	0	0.6	4.3	Q8113	0.3	0.2	8.9	Q8132	0	0	3.4	Q8802	0	0.4	73.2
Q8102	0	0.3	4.3	Q8115	8.6	8.9	0	Q8135	2.6	3.2	8.9	Q8807	0	6.3	0
Q8103	4.0	0	8.9	Q8118	0	0	5.0	Q8136	2.5	1.8	0	Q8818	0	0	5.0
Q8104	0	0.4	3.1	Q8119	0.7	1.4	0	Q8137	1.8	2.5	8.9	Q8822	5.5	4.9	0
Q8105	0	0.4	3.2	Q8120	0.7	2.3	0	Q8201	0	0.6	3.9	Q8823	8.9	8.5	0
Q8106	0	0.3	4.3	Q8122	0.5	1.4	0	Q8202	0	0.8	3.4	Q8805	0	2.5	33
Q8107	0	0.3	4.2	Q8123	0.5	1.4	0	Q8203	1.4	0.9	0	Q8806	0	1.2	135
Q8108	2.4	3.2	0	Q8127	1.4	1.5	0	Q8455	1.1	1.7	8.9	Q8851	0	5.4	81.5

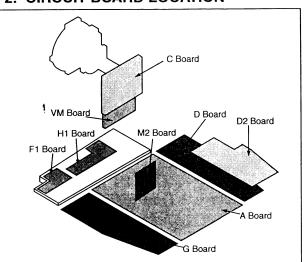




## 5-1. BLOCK DIAGRAMS (4)



#### 5-2. CIRCUIT BOARD LOCATION



### 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

- All capacitors are in µF unless otherwise noted.
- pF: µµF 50WV or less are not indicated except for electrolytic types.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm Electrical power rating: 1/4W

- Chip resistors are 1/10W
- All resistors are in ohms.

k = 1000 ohms, M = 1000,000 ohms

• : nonflammable resistor.

• fusible resistor.

 $\triangle$ : internal component.

: panel designation or adjustment for repair.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in Volts.
- Readings are taken with a 10Mohm digital mutimeter.
- Readings are taken with a color bar input signal.

: earth - chassis.

Voltage variations may be noted due to normal production

: B + bus.

: B - bus.

- 28 -

: RF signal path.

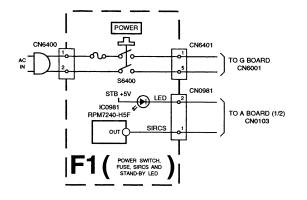
: earth - ground.

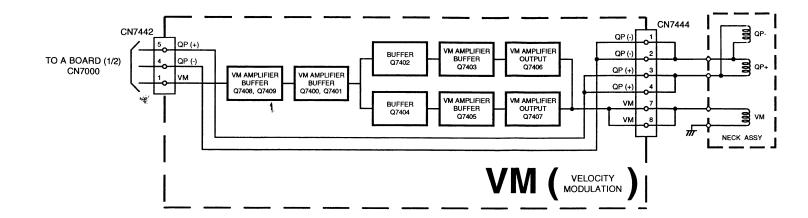
## Reference Information

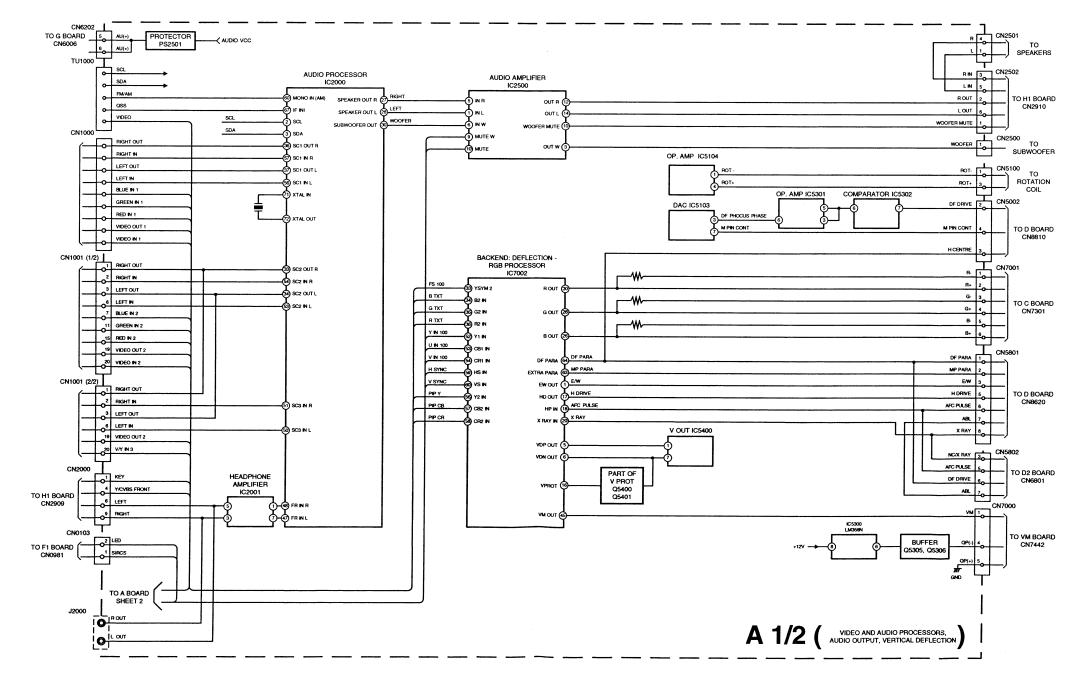
RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NON FLAMMABLE CARBON
	FUSE	: NON FLAMMABLE FUSIBLE
	RS	: NON FLAMMABLE METAL OXIDE
	RB	: NON FLAMMABLE CEMENT
	RW	: NON FLAMMABLE WIREWOUND
	<b>※</b>	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

**Note:** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

**Note :** Les composants identifiés par une trame et par une marque  $\Delta$  sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié. specified.







## 5-1. BLOCK DIAGRAMS (2)

